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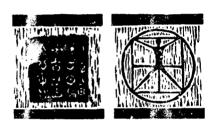# FINAL REPORT
DOD USER-NEEDS STUDY, PHASE II

FLOW OF SCIENTIFIC AND TECHNICAL INFORMATION WITHIN THE DEFENSE INDUSTRY

VOLUME III
A. FREQUENCY DISTRIBUTIONS AND CORRELATION
B. RELATIONSHIP AND COMPARISON

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VOLUME III
A. FREQUENCY DISTRIBUTIONS AND CORRELATION
B. RELATIONSHIP AND COMPARISON

30 November 1966

Submitted to
Office of the Director of Defense Research and Engineering
Advanced Research Projects Agency
Department of Defense
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FOREWORD

The Department of Defense (DOD) has conducted a two-phase study to determine how scientists and engineers in government and industrial research, development and production activities acquire information for performing work assignments on DOD programs. This study is referred to as the DOD User-Needs Study, Phase I and Phase II.

Objectives of the study are to develop (a) an understanding of the scientific and engineering process and its technical information needs, (b) implications for current and future DOD scientific and engineering information systems, and (c) information to guide administrative decisions on the scope of DOD scientific and technical information programs.

The Phase I study covered the information needs of DOD personnel engaged in research, development, test and evaluation (RDT&E) activities. Results of this study are contained in Reference 1.

Phase II investigated the nation's defense industry to determine its information needs, and the flow of scientific and technical information (flow process) inherent in satisfying those needs. It is based on a representative sample of 1500 individuals from 83 organizations in the defense industry.

The Phase II Final Report describes the results of Phase II, and compares them with those of Phase I. It is presented in three volumes. Volume I contains a nontechnical summary of Phase II, including guidelines for management decisions and recommendations for the future. Volume II describes the technical approach, findings and recommendations of the study. Volume III presents the reduced data, in the form of frequency distributions and models for relationships among component parts of the flow process. For the reader's convenience, both Volumes II and III are divided into two parts, A and B.

Phase II was performed by North American Aviation, Inc., under Contract DSA-7-16244, awarded by the Defense Supply Agency and funded by the Advanced Research Projects Agency. The study was administered by Mr. Walter M. Carlson, Director of Technical Information in the Office of the Director of Defense Research and Engineering, and monitored by Mr. Howard R. Lawson of the Defense Documentation Center. Survey interviews were made possible by the cooperation of the National Security Industrial Association and the participating organizations listed in Appendix 1 of Volume II.

In addition to those listed on the title page, the following North American Aviation personnel contributed to the successful completion and documentation of Phase II: Mr. Forrest G. Allen, Mr. Martin Cutler, Mr. John F. Duewel, Mrs. Marian E. Farnsworth, Miss Darnell Gentry, Mr. David S. Irwin, Mr. Roland K. Jacobson, Dr. Edith S. Jay, Mr. Leonard B. Jenson, Mr. Laurence Kasden, Mr. Richard F. Lees, Mr. Robert J. Mason, Jr., Mrs. Philotheos J. Mazzagatte, Mr. Spencer B. McCain, Dr. Franklyn J. Michaelson, Mr. William R. Myers, Mr. William E. Nelson, Mr. Solomon L. Pollack, Mr. Louis J. Precht, Jr., Mr. Carroll M. Shipplett, Mr. Keith V. Smith, and Mr. Hagop H. Terzagian.

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1. INTRODUCTION

1.1 PURPOSE AND OBJECTIVES OF PHASE II

The principal technical tasks of Department of Defense (DOD) contractors are research, development and production of weapons and their supporting systems. Their efforts involve searching for and using an enormous amount of scientific and technical information. This store of information is continually growing, accompanied by an increasing need for improving the process of acquiring it.

The problem in the design of information systems is to channel the required information to interested persons as efficiently as possible. The goal is to provide the right information to the right person, in the right form, at the right time. A first step in achieving this goal is to define the user's need and procedures for acquiring technical information.

The Office of the Director of Defense Research and Engineering has initiated a two-phase study of user needs to determine the information acquisition patterns within the defense community. A prior study (DOD User-Needs Study, Phase I) surveyed these patterns among a random sample of research, development, test and evaluation (RDT&E) personnel of the Department of Defense.

The aim of the present Phase II study is to perform a similar survey to learn how scientists and engineers in the defense industry gather scientific and technical information. Data were obtained by personal interviews with a representative sample of 1500 from a population of approximately 120,000 scientists, engineers and technical personnel. These personnel were employed by 73 companies, 8 research institutes and 2 universities that are defense contractors. Each interview dealt with a specific task recently completed by the user, and his experiences relating to the need for, search for, and acquisition of information required in performing the task. Data were also collected concerning the individual's use of formal technical information centers and services, and on his background, experience and work activity.

The major study objectives were to answer questions in the following areas:

- What are the educational, experience and job characteristics of the users of scientific and technical information in the defense industry?

- What is the nature of the scientific and technical tasks within the defense industry?

- What characteristics does the defense industry exhibit in its utilization of technical information centers and services?

- What characterizes the search and acquisition process in the defense industry?

- What are the significant factors within the flow of scientific and technical information (flow process) for the defense industry?

● What are the differences between DOD in-house and defense industry personnel and their needs and procedures for acquiring scientific and technical information?

The study concentrated on the information wanted and used to perform specific tasks. It was not concerned with "current-awareness" (i.e., "intentional browsing" that is not task-oriented) information which a person uses to maintain an awareness of the state of the art, to educate himself, to review previously known areas, and to stimulate his thinking.

Many investigations have been performed, and much has been written, concerning the flow of scientific and technical information. The tendency, however, has been to examine only small portions of the flow process, or to speculate about large portions of the flow process in vague generalities. Therefore, very little of a comprehensive, definitive and unifying nature actually has been said about the process. The DOD User-Needs Study is the first attempt to obtain data on a large portion of the flow process, and the Phase II analysis is the first attempt to draw definitive and unifying conclusions from these data. This, in turn, will provide the first comprehensive definition of the information requirements in today's complex array of scientific and technical endeavors.

1.2 CONCLUSIONS

The major conclusions of the study can be expressed in the form of guidelines for management decisions bearing on the direction and scope of DOD information programs. These guidelines are supported by the numerical results which appear in Sections 2 through 5 and are summarized in Sections 5, 6 and 7 of Volume II. The two surveys produced a considerable mass of data concerning the scientific and technical process and its information needs. It is likely that additional analysis in depth may yield further information about the user's needs and the flow process that would permit refinements and additions to the present guidelines.

Importance of Certain Categories of Information

Priority of effort should be assigned to information which is:

● In the development phase of the research, development and production cycle.

● Related to design and performance.

● In the engineering field.

The engineering subfields that are of greatest interest are electronics and electrical engineering, and aeronautics and space technology.

Importance of the Local Work Environment as a Source for Information[1]

Eighty percent of the time, the Phase II users first searched for information within the local work environment. Therefore, information policies should recognize

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[1]The "local work environment" extends only as far from the user as an internal company consultant, but not as far as the company Technical Information Center, which is his connection with the formal information system (see Table 1-2).

and seek to strengthen the utility of local sources of scientific and technical informa-
tion. Specifically, more effort should be devoted to:

- Organized storage and active circulation to the local work environment
  of information which is informal or semiformal in composition.

- Tailoring for the local work environment the indexing, abstracting,
  organization and analysis of information, prior to its distribution.

- Selective and automatic dissemination to the local work environment of
  these tailored indexes, abstracts, and organized and analyzed information.

Partially organized and analyzed ("once-over-lightly") information is of ques-
tionable value, since it satisfies only a small percentage of information needs in
task-oriented situations.

Publicity Concerning DOD Information Centers and Services

More effort should be devoted to publicity programs for informing the scientific
and technical community, especially within the defense industry, regarding the
availability of DOD Information Centers and Services and the procedures for their
most efficient use.
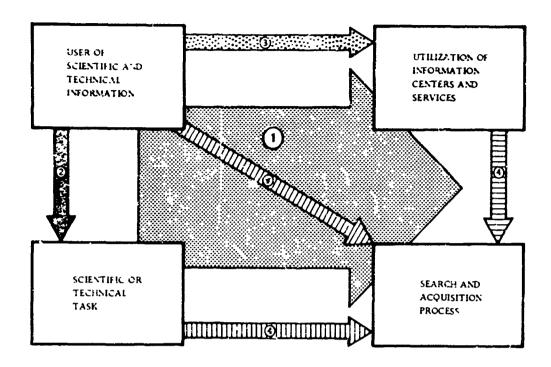
Satisfying the Needs of the Significant Users of Information

More effort should be devoted to satisfying the needs, and minimizing the infor-
mation acquisition problems, of the significant users of scientific and technical
information. In general, these users are characterized by their value to the company:
that is, they are research and development scientists or engineers who have an
advanced degree, are specialists or in lower management levels, and are highly paid.
These personnel are also the real users of information centers and services and the
ones most frustrated by problems involving their use.

Input/Output Relations for the Flow Process

The major components of the flow process are the (a) USER of scientific and
technical information, (b) scientific or technical TASK, (c) UTILIZATION of informa-
tion centers and services, and (d) SEARCH AND ACQUISITION process. From a
systems design point of view, it is both informative and suggestive to consider
(see Figure 1-1):

- The primary "input/output" relation (symbolized by arrow 1) with USER
  and TASK as "inputs" (i.e., tending to influence) and UTILIZATION and
  SEARCH AND ACQUISITION as "outputs" (i.e., tending to be influenced).

- A secondary input/output relation (symbolized by arrow 2) with USER as
  input and TASK as output.

- A secondary input/output relation (symbolized by arrow 3) with USER as
  input and UTILIZATION as output.

*The arrows point from input (tending to influence) to output (tending to be influenced).

Figure 1-1. Input/Output Relations for the Flow Process*

- A secondary input/output relation (symbolized by the arrows marked 4) with USER, TASK and UTILIZATION as inputs and SEARCH AND ACQUISITION as output.

Significant Relationships within the Flow Process

The analysis characterized relationships among elements of the flow process. These relationships should be utilized in the planning and operation of scientific and technical information programs. Among the more significant relationships are:

- The higher the user's level and value to his organization, the more complex the task and its information requirements.

- Greater complexity of the task occurs earlier in the research, development and production cycle. In the earlier phases of the cycle, information is needed in greater formality and detail; and it takes longer to acquire this information.

- As the formality of the task output increases (i.e., from findings through decisions to plans), the complexity of the information tends to increase.

- When more time is available for a task and for the acquisition of information, the user tends to be more demanding in regard to the organization of the media conveying the information and the volume of information required.

- Those who tend to make more use of information centers and services, want more formality and detail in the information media to satisfy their needs.

- When the user goes to a more distant first source (i.e., formal information centers) the information requested will involve more formal media, in greater volume and accompanied by a greater allowable acquisition time. On the other hand the more distant first source tends to yield only part of the needed information, so that further search is required.

Comparison of Phases I and II

The five general conclusions of Phase I are:

- Engineering data is the most important category of information.

- The local work environment is the most important first source for information.

- Information analysis prior to distribution is important in a scientific and technical information program.

- The DOD Information Centers and Services are not sufficiently used.

- The user is not completely satisfied with his ability to obtain information.

Although answers to comparable questions in Phases I and II exhibit significant differences (see Section 7), the Phase II data sustain these conclusions.

Continuing Study and Analysis

More effort should be devoted to the extension of progress made by the DOD User-Needs Study, as described in the following subsection.

1.3 RECOMMENDATIONS[2]

The two surveys of user needs within the Government and defense industry environments have yielded a wealth of valuable data relating to the scientific and technical information flow process. The analysis of these data, notwithstanding cost and schedule limitations inherent in an exploratory research project, has resulted in useful but preliminary insights into and explanations of the flow process. However, there are abundant lodes of information yet to be discovered, mined and refined, in order to exploit more fully the economic value of the available data base.

The Phase II study was a pioneering attempt to draw comprehensive, definitive and unifying conclusions from data on a large portion of the flow process. From the perspective gained in this study, it is clear that certain portions of the flow process

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[2]Since the discovery and exploitation of the desired information is subject to the law of diminishing returns, the recommendations are goals and should be assigned priorities according to the twin criteria of objectives and available resources.

merit further investigation and that there is considerable room for refinement and extension of the analysis. A more detailed discussion of the recommendations contained here may be found in Section 8 of Volume II.

The present study has provided a valuable basis for this further investigation and refinement. In addition to yielding guidelines for management decisions, it has also provided:

- A structure and its numerical description with which to view, construct and estimate models describing the information flow process.

- A framework for designing field experiments, performing estimation and testing hypotheses concerning the flow process.

- A methodology for overcoming the analytic deficiencies in past and present user needs studies[3] by the relationship analysis cycle of transforming qualitative question responses into numerical form, constructing and estimating multivariate models for relationships within the flow process, and then transforming the numerical relationship results back to qualitative form.

- A basis for the recommendations which follow concerning: (a) additional field experimentation regarding the flow process; (b) a program for coordinating additional field experimentation and computer simulation in the analysis and optimization of the flow process[4]; and (c) refined analysis of the data from the Phase I and Phase II studies.

Additional Field Experimentation

In order that the implications of Phase II be fully exploited, the flow process merits further investigation. There should be additional field observation, experimentation and analysis regarding the flow process, such as:

- An investigation of the feasibility and effect upon the flow process of the guidelines in Section 1.2.

- An investigation of task-oriented use of information centers and services.

- Experiments, suggested in Reference 3, concerning (a) dissemination of documents; (b) dissemination of scientific and technical intelligence information (i.e., what is going on); (c) organization and analysis of information in selected fields; (d) indexes, title listings, abstracts and catalogues in selected fields; (e) Specialized Technical Information Centers; (f) techniques for processing information; and (g) evaluation and improvement of technical writing.

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[3] Noted by H. Menzel in Chapter 3 of Reference 2, and by B. Griffith and W. Paisley during the Progress Review Panel on Information Needs and Uses at the 29th Annual Meeting of the American Documentation Institute, October 3-7, 1966.

[4] The flow process is optimized when its effect upon the performance of a scientific or technical task is optimized.

- Experiments suggested in Reference 7, which appeared while this final report was in publication.

- Specific experiments suggested by refined analysis of the data.

A Program for Analysis and Optimization

The flow of scientific and technical information has a profound, but as yet uncharacterized, effect upon the performance of scientific and technical tasks. In their efforts to improve task performance, both DOD and its contractors have made large investments in information centers and services. Optimization of the flow process will produce substantial benefits in terms of quality, resources and time.

The flow process and its effect upon task performance are quite complex, and field experimentation regarding them is both difficult and expensive. For such processes, mathematical solution is usually not feasible and computer simulation is often an effective and efficient means to complement field experimentation.

When the model (mathematical representation) for the process is translated into a simulation computer program (computer representation) for the process, the process and the effects of various factors upon it may be simulated. The accuracy and precision of the computer simulation increase as the accuracy and precision of the model increase. Therefore, computer simulation yields appropriate results at any stage of one's knowledge about a process, ranging from relative ignorance to relative certainty.
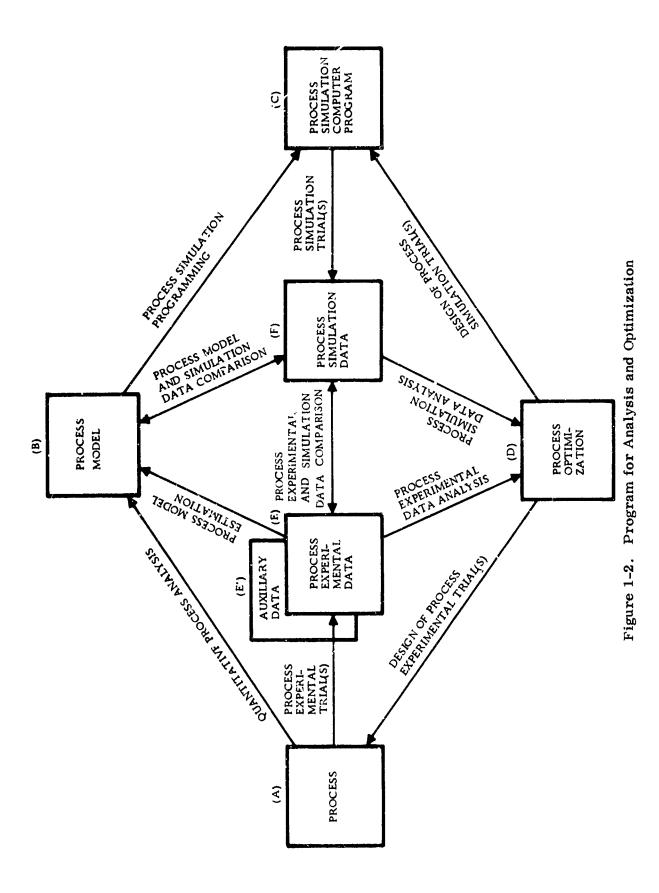
There are four periods in the evolution of a body of knowledge, as it matures from an art into a science: description, modeling, prediction, and control and optimization. With the completion of Phase II, knowledge concerning the flow process is emerging from the description period and entering into the modeling period.

Specific recommendations for additional experimentation have already been given. We now briefly describe a general program to coordinate field experimentation and computer simulation in the analysis and optimization of the flow process. This program (see Figure 1-2) is an improvement of one which was developed by North American Aviation, Inc., and is currently being utilized by a Government Agency on a process of comparable complexity. A more complete treatment of the program may be found in Section 8 of Volume II.

The program, which is adaptive in nature, is composed of ten basic stages:

1. Quantitative process analysis to transform the elements of the process into numerical form, and to construct a process model, with unspecified constants, for relationships among component parts of the process.

2. Experimental trial(s) to yield experimental data.

3. Process model estimation to produce estimates of unspecified constants in the process model from process experimental data and available auxiliary data.

4. Simulation programming to construct a simulation computer program from the model.

Figure 1-2. Program for Analysis and Optimization

5. Simulation trial(s) to yield simulation data.

6. Process model and simulation data comparison to provide a validation (i.e., positive check) for the simulation computer program.

7. Experimental and simulation data comparison to provide a validation for the combination of process model and simulation computer program.

8. Experimental and simulation data analysis to aid optimization by suggesting improvement of the process.

9. Process optimization to iteratively improve the process and apply appropriate stages of the program to the improved process.

10. Design of experimental and simulation trials to implement process optimization.

Additional experimentation is covered by Stages 1 through 3. Stages 4 through 7 concern computer simulation and its validation. In Stages 8 through 10, analysis and optimization of the flow process are treated.

The recommendations stated here provide the basis and framework for a long-term investigation and improvement of the flow process.

Refined Analysis of the Data

Since only a small fraction of the effort expended in collecting data is typically devoted to its analysis, a large amount of the information it contains generally is undiscovered and unexploited.

A more profound understanding of the DOD/defense industry information flow process can be achieved through more refined analysis of the data, as suggested below:

● More thorough examination of the distribution of answers to questions, and relationships among questions.

● Investigation into the effect of company size, industry, and interviewer bias on the answers to questions.

● Improvement in the arrangement of responses to a question, and the association of a numerical value with each response to a question, with the objective of improving the linearity of relationships among questions.

● Incorporation into the analysis of differences between the corresponding characteristics of the desired and actually received information, and additional special indices.

● Reformulation and re-estimation of appropriate models for relationships among questions, in order to reflect the above improvements and to investigate more specific relationships which involve only single questions (rather than combinations of related questions).

- For purposes such as the study of the selective dissemination process, formulation of reverse models to study the flow process in reverse (i. e., reverse the input/output relations described in Sections 1.2 and 6). An example would be a model relating the user's highest degree to the class of information, desired composition and layout of the information media, the first source for the information, and the usefulness of title listings or abstracts.

- Formulation and estimation of additional models describing the flow process, and utilization of additional analytical techniques (such as factor analysis).

- Division of the sample of 1500 users into appropriate subsamples to permit analysis and comparison of special groups, such as the three groups which acquired information that is: (a) conceptual, (b) design and performance, and (c) production.

- Application, as appropriate, of the above suggestions in making further analyses of the Phase I data, the similarities and differences of the Phase I and Phase II data, and the combined data from Phase I and Phase II.

1.4 METHODOLOGY

The methodology employed in the study of the defense industry (Phase II) was based on precedents established in the prior Phase I study of DOD personnel engaged in RDT&E. Improvements in methodology were achieved by profiting from lessons learned in the Phase I study, and through the use of a more comprehensive and powerful analytical approach. Also, the Interview Guide used in Phase I was tailored and improved to make it more suitable for use in a survey of defense industry needs. A more complete discussion of the methodology appears in Sections 2, 3, and 4 and Appendix 15 of Volume II.

Interview Guide

The initial portion of the study required (a) modification of the Interview Guide, (b) preparation of an Interview Guide Handbook and Reference Manual for use by the interviewers, (c) testing of the modified Interview Guide to validate revisions and provide a basis for further improvements, and (d) selection and training of the interviewers.

Modification of Interview Guide

The Phase I Interview Guide had to be modified in two major areas: (a) tailoring to the defense industry population; and (b) overall improvement based on Phase I experience, North American Aviation technical evaluation, and the pilot test. Modifications were designed to:

- Reorganize it, by removing extensive tables and including them in a separate Interview Reference Manual.

- Improve the printing and layout, making it easier to record data during interviews.

- Provide increased logical order of questions.

- Minimize the number of questions (e.g., by letting one group of related questions cover an entire subject, when possible).

- Assess the utilization of company Technical Information Centers.

- Assess the utilization of Non-DOD Specialized Information Centers.

- Investigate restrictions on availability of technical information.

- Provide for mutally exclusive responses.

- Expand, reorient and rearrange question responses.

The revised Interview Guide contained 63 questions, grouped according to (a) the user of information, (b) his most recent scientific or technical task, (c) his utilization of information centers and services, and (d) his search for and acquisition of information specifically related to the task. Most of the responses to questions in the Interview Guide are qualitative and, therefore, not susceptible to quantitative interpretation without using special techniques.

Interview Guide Handbook and Interview Reference Manual

The Interview Guide Handbook (Reference 4) is the basic documentation for the initial portion of the Phase II study. It contains an explanation of and instruction in the interviewing methods, questions to be covered and aids for the interviewers. In developing this Handbook, the primary theme was to tailor it to serve both as a training document on the objectives and conduct of the study and and as an interviewer reference. The Handbook also contains the basic study correspondence, a directory of participating organizations and a glossary of terms.

An innovation in Phase II was the introduction of an Interview Reference Manual. This Manual contains a compact, easily-handled listing of frequently used and complex responses for questions in the Interview Guide. The document was basically an interviewer aid, and was shown to the respondent when it would facilitate the interview. Instuctions in the use of the Interview Reference Manual are contained in the Interview Guide Handbook.

Pilot Test

A modified Interview Guide was pilot tested to validate the revisions accomplished for the Phase II study. As specified by DOD, the pilot testing was based on 20 interviews with selected engineering and scientific personnel of North American Aviation, Inc. The pilot test resulted in a reorganization of the questions into a more logical sequence.

Survey Operations and Controls

Selection and Training of Interviewers

Interviewers were selected on the basis of their scientific and technical backgrounds, research experience, interviewing and survey experience, maturity, personality and responsibility. All interviewers had at least a bachelor's degree and prior interviewing experience. The interviewing staff employed in the Phase II survey included eight behavioral scientists, three operations research analysts and three information processing specialists.

Each interviewer was given a two-week training program, consisting of class-room instruction and controlled field practice interviews. Training emphasized standardization of survey interview techniques in dealing with a highly diversified sample. Training sessions included Program Orientation, Scientific and Technical Information Systems, Survey Operations, Review of Phase I Results, Comprehensive Study of the Interview Guide, Summary of the Analysis Plan, Interview Demonstration, and four days of practice interviews with critiques of student performance. Remedial sessions were scheduled when the need for them was indicated during the practice interviews.

Selection of Sample for the Interviews

The National Security Industrial Association and the Director of Technical Information in the Office of the Director of Defense Research and Engineering contacted and obtained voluntary participation of the majority of organizations cooperating in the survey. North American Aviation, Inc. helped arrange for the participation of additional qualifying organizations. The organizations surveyed included 14 of the top

25 DOD contractors and 17 of the top 25 RDT&E contractors. They are considered representative of the major DOD/RDT&E contractors. Appendix 1 of Volume II lists participating organizations with the sample sizes drawn for each.

The Director of Technical Information provided explicit instructions on the method to be employed by the participating organizations in selecting the samples of individuals for interview. The sample for interview was obtained by the selection of a representative group of 1500 from a population of approximately 120,000 scientists, engineers and technical personnel. These personnel were employed by 73 companies, 8 research institutes and 2 universities having defense contracts. In addition, the sequential acquisition of data permitted strong positive checks to be made upon the internal consistency and representative nature of the sample. The individuals sampled represent approximately 1.5 percent of the total scientific, engineering and technical personnel of the 83 participating organizations.

Pre-Survey Preparation of the Interviewees

Early in the planning of survey operations, it was determined that the conduct of the survey and the quality of responses would be enhanced considerably if interviewees were familiar with the purpose of the study and the kinds of questions to be asked. Consequently a descriptive brochure, Synopsis of Interview Topics (see Appendix 8 in Volume II), was developed and distributed to each interviewee in advance of the interview.

This brochure acquainted the interviewees with the topics to be discussed. It provided a frame of reference, introduced the general subject matter of the interview, and tended to ease possible confusion and apprehension. The Synopsis also reassured the interviewee's management that the survey was solely intended to investigate information needs and acquisition procedures, and that it was not an attempt to obtain classified or proprietary information. Comment from the interview staff indicated that the Synopsis fulfilled its intended purposes.

Interview Policy

The sample to be interviewed spanned a diversity of backgrounds (e.g. , field of training and extent of formal education) and position levels (e.g., type of activity and level of responsibility). In addition, the flow of scientific and technical information is not widely discussed or understood. It was, therefore, realized that the interview questions might have different meanings to different interviewees.

In order to achieve comparable results under these conditions, the interview was "standardized" so that essentially the same information would be collected from each interviewee. This was achieved by the interviewer tailoring the formulation and sequence of the questions to each interviewee (i.e., "non-scheduled" interviewing). The interview was predominantly one of "free response, ' (i.e., where an explanation or description was required) in which there were few explicit bounds upon interviewee responses. An interviewer also encouraged interviewees to talk freely of their experiences, and to give examples of their information search and acquisition patterns.

Oper.itions

Early in the study program it was recognized that successful results would require careful planning, scheduling and control of survey operations. It was also clear that data collected in the field had to be monitored for quality, so that conclusions based on the data would be valid and meaningful.

Survey operations included correspondence with participating companies, interview scheduling, aggressive follow-up of missed interviews, and interview quality control. Each participating organization was assigned a control number. Upon completion, each interview was assigned an accession number to maintain control and facilitate subsequent analysis.

Personal in-depth interviews with the 1500 users lasted an average of 1 hour and 40 minutes per interview. All interviews were conducted in private, to ensure confidentiality and to prevent bias.

Controls

The quality of the analysis depended to a great extent on the quality of the data collected during the interviews. Consequently, appropriate procedures were developed and implemented to assure consistently high quality data and to provide accurate and complete inputs for computer analysis.

Quality control extended from the interview itself, through keypunching of the data, to subsequent analysis. Interview answers were recorded both in precoded and in narrative form. To minimize errors or omissions, each interviewer was required to review and inspect the material from each interview immediately after its completion, but before the next interview. Completed interviews were sent to the project office for review and preliminary audit for completeness, consistency and coding accuracy. Immediate feedback was provided to interviewers when needed to correct errors or improve performance on subsequent interviews.

To reduce errors in transcribing data from the Interview Guide to punched cards, the Interview Guide was designed so that coded responses could be punched directly from the Guide.

An extensive procedure of manual editing and narrative response classification was carried out to ensure the maximum completeness of the data. In this manner the potential "other" and "no response" entries in an interview were largely eliminated. In addition, the computer analysis had various automatic edit and consistency checks built into its routines.

Analysis[5]

The survey data consist of the reports of 1500 interviews, each containing the answers to 55 questions having qualitative responses and 8 questions having quantitative responses.

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[5]This analysis is respectfully dedicated to the memory of Dr. Edith Jay, whose ideas serve as an inspiration to all of us. The great contribution which she always brought to a project was prevented by her untimely passing.

Requirements and Objectives of the Analysis

An analysis should provide a bridge between the data, and meaningful guidelines for management decisions and recommendations for the future. The methods of summarization employed by the analysis should be sufficient to bring both the detailed and general information content of the data into focus. Otherwise, management will be forced to accept only its detailed information content, or to itself perform additional summarization so that its general information content is brought into focus. In order to achieve this:

- The analysis first should summarize the data until their detailed information content is brought into focus. This summary by its very essence is limited to only small portions of the flow process at once.

- The analysis then should continue to summarize the data until their general information content is brought into focus, so that both small and large portions of the flow process are described.

The first of these requirements could be achieved by means of frequency distributions for single questions and pairs of questions in the Interview Guide. In addition, the second requirement could be accomplished by an analysis of relationships among questions in the Interview Guide (which represent component parts of the flow process). Such an analysis would yield sufficiently summarized and properly focused general information, describing both small and large portions of the flow process. To achieve this analysis, however, the qualitative data acquired in the Interviews must be transformed into a numerical form.

Thus, the objectives of the analysis are to:

- Generate frequency distributions for single questions and pairs of questions in the Interview Guide.

- Transform the qualitative question responses into numerical form.

- Construct and estimate models for relationships among questions in the Interview Guide.

- Analyze and interpret the frequency distribution and relationship results, in order to provide meaningful guidelines for management decisions and recommendations for the future which are relatively insensitive to changes in the response transformation.

Overview of the Analysis

Detailed information describing small portions of the flow process is provided by one-way and two-way frequency distributions. A one-way frequency distribution is the distribution of the percent of answers to a question that corresponds to each question response, and a two-way frequency distribution is the distribution of the percent of answers to a pair of questions that corresponds to each pair of question responses (see Table 1 1). In addition, the relationship analysis cycle yields general information describing both small and large portions of the flow process.

The relationship analysis cycle transforms the qualitative question responses into numerical form, constructs and estimates models for relationships among questions, and then transforms the numerical relationship results back to qualitative

Table 1-1. One-Way and Two-Way Frequency Distributions

TWO-WAY FREQUENCY DISTRIBUTION

Question 25: Desired Depth of Information Media

	RESPONSE		
	A Once Over Lightly	A Specific Answer	A Detailed Analysis
All from Recall	0%	5%	2%
One Report or Document	2%	18%	10%
A Sampling of the Reports and Documents Available	3%	10%	9%
All Reports and Documents That Could Be Found Pertinent to the Question	2%	23%	16%

RESPONSE

Question 22: Desired Volume of Information Media

ONE-WAY FREQUENCY DISTRIBUTION

Question 22: Desired Volume of Information Media

RESPONSE	FREQUENCY (%)
All from Recall	7
One Report or Document	30
A Sampling of the Reports and Documents Available	22
All Reports and Documents That Could Be Found Pertinent to the Question	41

form (see Figure 1-3). As illustrated by Table 1-2, the transformation of qualitative question responses into numerical form is accomplished in two steps:

- A detailed structure is developed by grouping the related responses to a question and arranging these groups (and, to the extent possible, the responses within groups) into an informative order. The grouping and arranging are based on the primary unifying characteristic of the question's responses, as determined from the responses themselves and the intent of the question.

- A numerical description of the detailed structure is defined by associating a number with each ordered question response. The base point for a numerical scale is selected, according to the primary unifying characteristic of the question. With each response there is then associated a numerical value, corresponding to its relative "distance" from the base point, along a scale from -1 to 1 (usually from 0 to 1).

Next the construction and estimation of models for relationships among questions are performed in the following four steps:

- Groups of related questions are arranged into an informative and unifying order to form a general structure. To the extent feasible, the arrangement is based on the desirable characteristic that a question tends to influence only those questions which follow it. An example is contained in Table 1-3.

- Pairs of related questions are combined as illustrated in Table 1-3, in order to simplify the specification and estimation of models for relationships among questions in the general structure. Except for rare cases in which a product is employed, all of the combinations of related questions are averages of the numbers previously assigned. The scales remain between -1 and 1 (usually between 0 and 1), in all cases.

- Linear models are specified to represent potential relationships among the combinations of questions in the general structure. (See Table 1-4). The models are defined in general form to include unspecified constants which, when evaluated, completely determine the model.

- Unspecified constants in the general form of the models are estimated from the data by the technique of regression analysis. Regression analysis also indicates the significance of a relationship and the relative contribution of question combinations to the relationship (see Table 1-4).

Finally, the numerical relationship results are transformed back to qualitative form by a ranking procedure which:

- Ranks question combinations in order of their contribution to each relationship, as shown in Table 1-4.

- Ranks question combinations in order of their overall contribution to the relationships in each component of the flow process and the flow process itself, as illustrated in Table 1-5.
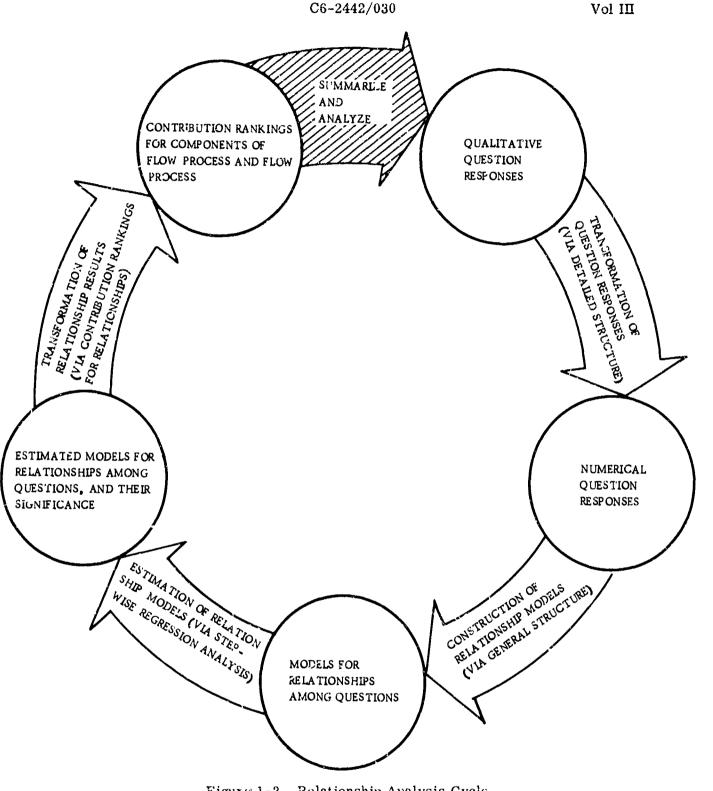
Figure 1-3   Relationship Analysis Cycle

Table 1-2. Transformation of Qualitative Question Responses into Numerical Form

	Question 14: First Source for Information	
	Informative Order[A]	Scale
I	Received with task assignment	0
II	Recalled it	0.05
III	Searched own collection	0.10
IV	Respondent's own action	0.15
V	Assigned subordinate to get it	0.20
VI	Asked a colleague	0.25
VII	Asked my supervisor	0.30
VIII	Requested search of department files	0.35
IX	Asked an internal company consultant	0.45
X	Searched company information center ⎤ [B]	0.50
X	Requested library search ⎦	0.50
XI	Requested data from vendor, manufacturer, supplier ⎤ [B]	0.60
XI	Searched vendor, manufacturer, supplier sources ⎦	0.60
XII	Searched outside library	0.70
XIII	Asked an external consultant or expert	0.80
XIV	Requested search of DOD Information Center ⎤ [B]	0.90
XIV	Search DOD Information Center ⎦	0.90
XV	Asked customer	1.00

A.   It is instructive to note the evolution of the responses and their order:

   1.   The 12 responses to Question 40 in the Phase I Interview Guide were reordered and expanded into the 16 responses to Question 14 in the Phase II Interview Guide.

   2.   Then the 16 responses were expanded to 18, based on an analysis of the answers to the response, "other - specify."

   3.   Finally the 18 responses were arranged into an informative order, according to their primary characteristic, which may be called "distance from the user."

B.   No distinction is made between the two responses in this group of related responses.

The relationship analysis cycle is believed to be novel in the field of information science. Its employment and testing in Phase II have yielded results that are encouraging, and implications for the future that are provocative.

Analysis and interpretation of the above results produce meaningful guidelines for management decisions and recommendations for the future which are relatively insensitive to changes in the detailed structure and its numerical description. In addition, a comparison is made between the comparable one-way and two-way frequency distributions from Phases I and II; and the Phase I conclusions are reviewed in the light of the Phase II data.

Table 1-3. Arrangement and Combination of Questions

USER COMPONENT
A. User's Age: Question 48
B. User's Education
1. Highest Degree: Question 50A
2. Field of Degree: Question 50C
3. Year of Degree: Question 50B
C. User's Experience
1. Job Experience: Question 51
2. Company Experience: Question 52
Combination of Questions: 1/2 (Question 51 + Question 52)
D. User's Position
1. Kind of Position: Question 55
2. Field of Position: Question 56
E. User's Level
1. Equivalent Government Service (GS) Rating: Question 58
2. Personnel Supervised: Question 49
3. Type of Activity: Question 54
Combination of Questions: 1/2 (Question 49 + Question 58)

Table 1-4.   User Relationships

User Characteristic	Judged Potentially Related To	Related To[A]	Candidate For Relationship[F]
User's highest degree (Q50A)	User's age (Q48)		
User's field of degree (Q50C)	User's age	User's age[B, C]	User's highest degree[G]
User's experience (1/2(Q51+Q52))	User's age	User's age[D, E]	User's highest degree
User's kind of position (Q55)	User's age, highest degree, field of degree and experience	User's highest degree[B, D]	
User's field of position (Q56)	User's age, highest degree, field of degree, and experience	User's field of degree,[D] highest degree,[B] and age[B]	User's kind of position
User's level (1/2(Q49+Q58))	User's age, highest degree, field of degree, experience, kind of position, and field of position	User's highest degree,[D] experience,[C] age,[C] and field of position[B, E]	

A.   Are ranked in order of contribution to the relationship

B.   Coefficient is negative (all other coefficients being positive).

C.   Makes a significant contribution to the relationship.

D.   Makes a highly significant contribution to the relationship.

E.   Relationship is significant.

F.   Are ranked in order of potential contribution to the relationship.

G.   Would potentially make a significant contribution to the relationship.

Table 1-5. User Ranks*

Combination of Questions \ Related Question Combinations	User's Age (Q48)	User's Highest Degree (Q50A)	User's Field of Degree (Q50C)	User's Experience (1/2(Q51+Q52))	User's Kind of Position (Q55)	User's Field of Position (Q56)	User's Level (1/2(Q49 + Q58))
User's Highest Degree (Q50A)		0					
User's Field of Degree (Q 50C)	1	2	0				
User's Experience (1/2(Q51+Q52))	1	2		0			
User's Kind of Position (Q55)		1			0		
User's Field of Position (Q56)	3	2	1		4	0	
User's Level (1/2(Q49+Q58))	3	1		2		4	0
Question Combination Column Total	32	8	49	50	52	52	60
Question Combination Rank	2	1	3	4	5-1/2	5-1/2	7

*Table entries are assigned, according to order of appearance in Table 1-4, as follows: 0 to combination of questions in CHARACTERISTIC column: 1 to 1st question combination, 2 to 2nd question combination, . . . , m to last question combination in RELATED TO column; m+1 to 1st question combination, m+2 to 2nd question combination, . . . , p ≤11 to last question combination in CANDIDATE FOR RELATIONSHIP column; and 12, which is omitted for simplicity, to those question combinations not appearing.

Computer Operations

Two basic kinds of computer programs were used in the study:

- Special North American Aviation, Inc. programs used to prepare interview data for analysis.

- Biomedical or BMD programs used in the analysis itself (see Reference 5).

Three of each kind were employed, brief descriptions of which follow.

North American Aviation Data Preparation Programs

- Creation and Updating: This program edits all inputs and creates a new tape, or updates an existing one. The answer to each question is tested for proper code limits and, in some cases, is cross-checked with answers to other questions.

- Reorder: This program assigns the sequence of coded responses, in the detailed structure, to be used for frequency distributions.

- Rescale: This program assigns the numerical values to coded responses.

Biomedical Data Analysis Programs (see Reference 5)

- Transgeneration: This program accepts data created by the Reorder or Rescale Program and combines questions, as desired, for subsequent analysis. The program was used to combine questions as specified in the general structure.

- Two-Way Frequency Distribution: This program computes (a) two-way frequency distributions; (b) Chi-square value and degrees of freedom for each distribution; and (c) means, standard deviations and correlation coefficient for each question associated with the distribution.

- Stepwise Multiple Regression: This general purpose statistical program was used to compute (a) a sequence of estimates for linear models in a stepwise manner; (b) a correlation matrix; and (c) associated significance-level information.

1.5 BACKGROUND

The DOD User-Needs Study was exploratory in nature. It attempted to structure and describe the nebulous process of the flow of scientific and technical information. The study has not completely solved the problems of defining, designing and operating a scientific and technical information program. Some of the reasons for this are:

- The DOD User-Needs Study was the first investigation of its size and scope dealing with a large portion of the information flow process, and its component users and tasks within major segments of the scientific and engineering community.

- The samples from Phases I and II exhibited significant differences in their users, tasks, utilization of information centers and services, and search and acquisition process.

- The Phase II analysis, although compatible with that of Phase I, was more comprehensive and definitive.

- Time and resource limitations precluded the accomplishment of more than a preliminary application of the Phase II analytical approach to the Phase II data, much less its application to the Phase I data.

- Phase II results should be regarded as indicative, but not conclusive, and meriting additional investigation.

On the other hand, the study represents the initial step essential in developing a base of knowledge on which to build future programs. It has investigated the flow process from within, and has concentrated on the study of the user's actual experience relative to specific tasks.

In using and interpreting the results of this study, the following points should be kept in mind:

- Prior to these studies, no definitive description of the composition of the DOD RDT&E and defense industry populations was available. Consequently no attempt was made to select a stratified sample (this is now possible, based on the data acquired in the studies). However, the broad base and large samples used in the Phase I and Phase II studies are representative of the scientific and engineering communities studies. In fact, the Phase II data exhibited strong internal consistency.

- The study technique of investigating "critical incidents" (in this case a specific task that was recently completed by the user) ensured the acquisition of specific data on the flow process. Thus, the data acquired in the study are based on specific experiences in the interviewee's work situation, and not on his opinions, judgments and other generalities.

- The question or information areas covered in the Interview Guide were not closed-end or multiple choice. As asked, almost every question required a free response answer based on the interviewee's task-oriented experience.

- The analysis has concentrated on the over-all sample rather than its compartmentalized segments. Thus a description of particular specialists (e.g., chemists, electrical engineers, etc.), although feasible, was not attempted.

- The questions and pairs of questions dealing with INFORMATION (as opposed to those dealing with the USER, TASK or UTILIZATION) should be considered as exclusively INFORMATION descriptors, in that they are

drawn from a different data base than the other descriptors (i. e., any one USER and TASK can have from one to five information units associated with them). [6]

- Conclusions involving combinations of questions should not be drawn from the frequency distributions of single questions, but only from those involving pairs of questions and the models of relationships.

- In order to analyze the data, the qualitative responses were transformed into numerical form as described in Section 1.4. One must take this transformation into account in order to apply the results of this study intelligently to information programs. If a different transformation is desired, then certain portions of the analysis should be repeated with the new transformation.

- Regression analysis estimates of models describing the flow process are sensitive to changes in the detailed structure and its numerical description, and in the general structure and its combinations of related questions. The model estimates in Section 5 and in Volume II must then be taken as relative, and not exact. However, the guidelines for management decisions in Section 1.2 have been obtained from the model estimates via a ranking technique which is relatively insensitive to such changes. This technique is described in Volume II.

- Employment of the terms, input and output, to describe relations and factors within the flow process not only provides insight into the flow process, but also facilitates the analysis of the process and the design and analysis of the information system which serves it. One must realize, however, that regression analysis can merely characterize and indicate the significance of a relationship. It cannot imply a cause-and-effect relationship, for this can only be accomplished by thorough knowledge of the flow process.

1.6 ORGANIZATION OF VOLUME III

The essence of Phase II may be obtained by reading Section 1. Sections 2 through 5 contain the data which have been reduced according to the analysis described briefly in Volume I and in detail in Volume II. Four types of reduced data are presented in tables: one-way frequency distributions, two-way frequency distributions, stepwise regression relationships, and comparison of Phase I and Phase II distributions. Introducing each type of table is an explanation of how to interpret it. This

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[6] Twenty-four percent of the USERS performed TASKS which had an output associated with a design or design technique; but the 10 percent of INFORMATION that related to design or design techniques represents 547 of the 5359 separate information units that were used in the survey tasks. These 547 information units could have been used by anywhere from 7 percent to 36 percent of the USERS. Therefore, INFORMATION questions identify INFORMATION characteristics and not those of USER, TASK or UTILIZATION.

is followed by an index of the tables and their location. For the reader's convenience, Volume III is divided into two parts:

- Volume IIIA, which contains Sections 1, 2, 3 and 4.

- Volume IIIB, which contains Sections 5 and 6.

Section 2 presents the one-way distributions of answers to questions in the Interview Guide. To present the data in a more concise and understandable form, responses have been combined or grouped in certain cases. The tables appear in question number sequence.

The two-way frequency distributions of answers to pairs of quest'ms appear in Section 3. There are two groups of two-way distributions:

- Those involving questions about the USER of scientific and technical information, his scientific or technical TASK and his UTILIZATION of information centers and services, but not the SEARCH AND ACQUISITION process. These tables represent sample sizes of 1500.

- Those involving questions about the USER, TASK, UTILIZATION, and SEARCH AND ACQUISITION. These tables generally represent sample sizes of 5359.

The tables appear in sequence by group, and by number of the first question in the pair within a group.

Section 4 contains the complete correlation matrix. The stepwise regression relationships are presented in Section 5. These involve the linear models of relationships among questions. Four computer runs were made to create the 39 sets of tables (22 tables involving USER, TASK, and UTILIZATION, but not SEARCH AND ACQUISITION questions; and 17 tables involving USER, TASK, UTILIZATION and SEARCH AND ACQUISITION questions). Each computer run had a different sample size, because questionnaires without answers to all questions involved in that particular run were eliminated. The tables are in sequence according to the general structure.

Finally, Section 6 contains the comparison of the Phase I and Phase II one-way frequency distributions. The tables are in sequence by the Phase II question number.

The work "chunk" was used in both Phases I and II to represent an information unit. A chunk is the smallest identifiable and meaningful quantity of information which is required in the conduct of a task.

Throughout the volume, the following abbreviations have been used:

- DDC – Defense Documentation Center
- DOD – Department of Defense
- GS   – General Schedule
- Q   – Question
- STAR – Scientific and Technical Aerospace Reports
- TAB – Technical Abstract Bulletin
- TIC – Technical Information Center

2. ONE-WAY FREQUENCY DISTRIBUTIONS

2.1 INTERPRETATION

See Appendix 15 of Volume II and Reference 5 for a description of BMD 08D, the computer program employed for the compilation of frequency distributions.

Each table presents an abbreviated form of the question as it appeared in the Interview Guide, and five columns of information consisting of:

1. The responses to the question arranged in order according to the detailed structure. That order is expressed by Roman numerals. If the same Roman numeral appears with more than one response, no distinction is made between these responses in the analysis.

2. The order of responses in the Interview Guide, denoted by Arabic numerals. If there are no Arabic numerals, the question is narrative. In most cases the open-end responses (e.g., "other") were categorized as part of the manual edit; but when it could not be categorized, it is listed as "other" without an identifying code.

3. The response descriptions that originally appeared in the Interview Guide or ones that are indicative of the grouped responses.

4. The number N to indicate the number of answers for each response. In most cases, the total number of answers will be 1500 for USER, TASK and UTILIZATION questions and 5359 for SEARCH and ACQUISITION questions.

5. The one-way frequency distribution of the percent of answers that corresponds to each question response. This one-way frequency distribution appears as the (marginal) row or column totals for the appropriate two-way frequency distribution(s).

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2.3 DISTRIBUTIONS

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Q2. Task Initiator   Table 2-1

What prompted the task?

			N	Percent
I.	(4)	Initiative of respondent	204	13.6
II.	(5)	Decision by respondent and colleagues	120	8.0
III.	(6)	Application of standard procedures	127	8.5
IV.	(3)	Direction by immediate supervisor	537	35.8
V.	(2)	Direction by higher management	283	18.8
VI.	(1)	Instruction or questions directed from the customer	229	15.3
			1500	

Q3. Elapsed Time on Task   Table 2-2

What was the total elapsed time that you were active on this task, from the time you started it until the time you finished it, including periods during which you may have been diverted to other activities?

			N	Percent
I.	(1)	1-7 days	183	12.2
II.	(2)	8-14 days	110	7.4
III.	(3)	15-21 days	134	9.0
IV.	(4)	22-30 days	164	10.9
V.	(5)	31-90 days	412	27.4
VI.	(6)	91-180 days	251	16.8
VII.	(7)	181-270 days	83	5.5
VIII.	(8)	271-365 days	95	6.3
IX.	(9)	Over 365 days	68	4.5
			1500	

Q4. Percentage of Time on Task   Table 2-3

During the total elapsed time that you were active on this task, about what percentage of your work time did you devote directly to the task?

			N	Percent
I.	(1)	Under 25 percent	330	22.0
II.	(2)	25 – 49 percent	273	18.2
III.	(3)	50 – 74 percent	318	21.2
IV.	(4)	75 – 99 percent	251	16.7
V.	(5)	Full Time	328	21.9
			1500	

Q5. Type of Task Output   Table 2-4

What was the major output of the task?

			N	Percent
I.	(7)	Hardware	88	5.9
II.	(1)	Technical data or information	271	18.1
III.	(6)	A design (includes specifications)	294	19.6
IV.	(2)	A finding	197	13.1
V.	(3)	A recommendation	367	24.5
VI.	(4)	A decision	55	3.7
VII.	(5)	A plan	223	14.8
	(8)	Other	5	0.3
			1500	

Q6. Formality of Task Output   Table 2-5

How was the major output of the task presented or transmitted?

			N	Percent
I.	(5)	Hardware	15	1.0
II.	(4)	Informal briefing or discussion	100	6.7
III.	(3)	Informal document or memorandum	329	21.9
IV.	(2)	Formal briefing or demonstration	63	4.2
V.	(1)	Formal document	992	66.1
	(6)	Other	1	0.1
			1500	

Q7. Task Recipient   Table 2-6

To whom was the major output of the task directed?

			N	Percent
I.	(1)	Individual's own use	22	1.5
II.	(2)	Individual(s) within the respondent's company	890	59.3
III.	(5)	A particular contractor or contractors	172	11.5
III.	(6)	Department of Defense	268	17.8
III.	(7)	NASA	78	5.2
IV.	(3)	Members of the respondent's profession	45	3.0
V.	(4)	A major segment of an industry	22	1.5
	(9)	Other	3	0.2
			1500	

Q8. Class of Task Output   Table 2-7

What was the class of the major output of the task?

		N	Percent
I.	Only used for Question 16, Desired Class of Information		
II.	(1) Concepts	129	8.6
III.	(8) Raw data	24	1.6
IV.	(5) Math aids and formulae; computer programs	94	6.3
V.	(3) Designs or design techniques	362	24.2
VI.	(4) Experimental processes and procedures	75	5.0
VII.	(11) Test processes and procedures	86	5.7
VIII.	(13) Evaluation	141	9.4
IX.	(9) Specifications	93	6.2
X.	(6) Performance and characteristics	241	16.1
XI.	(7) Production processes and procedures	89	5.9
XII.	(10) Technical status	57	3.8
XIII.	(12) Utilization	53	3.5
XIV.	(2) Cost and funding; administrative action	56	3.7
		1500	

Q9. Kind of Task Output   Table 2-8

What was the kind of the major output of the task?

		N	Percent
I.	(2) Research – basic	64	4.3
II.	(1) Research – applied	239	15.9
III.	(11) System analysis	173	11.5
IV.	(3) Development – advanced	147	9.8
V.	(4) Development – engineering	188	12.5
VI.	(5) Development – operational system	163	10.9
VII.	(6) R&D support	119	7.9
VIII.	(7) Test or evaluation	190	12.7
IX.	(8) Production processes	69	4.6
X.	(9) Production end-items	58	3.9
XI.	(10) Reliability or quality control	69	4.6
XII.	(12) Customer relations	21	1.4
		1500	

Q11A. Field of Task Output (Grouped) Table 2-9

What was the field of the major output of the task?

	N	Percent
I. Production, Management and Social Sciences	143	9.6
(32) Miscellaneous arts and sciences	10	0.7
(23) Personnel and training	14	0.9
(26) Production and management	102	6.8
(28) Psychology and human engineering	17	1.2
II. Medical Sciences	33	2.2
(16) Medical sciences	33	2.2
III. Mechanical, Industrial, Civil and Marine Engineering	94	6.3
(11) Ground transportation equipment	7	0.5
(13) Installation and construction	36	2.4
(18) Military sciences and operations	21	1.4
(24) Photography and other reproductive processes	7	0.5
(29) Quartermaster equipment and supplies	0	0.0
(31) Ships and marine equipment	18	1.2
(33) Transportation	5	0.3
IV. Aeronautics and Space Technology	351	23.4
(01) Aircraft and flight equipment	197	13.2
(12) Guided Missiles	128	8.5
(19) Navigation	26	1.7
V. Electronics and Electrical Engineering	354	23.6
(05) Communications	35	2.3
(06) Detection	35	2.3
(07) Electrical equipment	29	2.0
(08) Electronics, electronic equipment	255	17.0
VI. Chemical Science and Material	181	12.1
(03) Chemical warfare equipment materials	2	0.1
(04) Chemistry	66	4.4
(10) Fuels and combustion	9	0.6
(14) Materials (nonmetallic)	56	3.8
(17) Metallurgy	35	2.3
(22) Ordnance	13	0.9
VII. Physical Science	193	12.8
(02) Astronomy, Geophysics and Geography	13	0.9
(09) Fluid mechanics	44	2.9
(20) Nuclear physics and nuclear chemistry	8	0.5
(21) Nuclear propulsion	3	0.2
(25) Physics	51	3.4
(27) Propulsion systems	74	4.9
VIII. Research and Research Equipment	131	8.7
(30) Research and research equipment (including computer science)	131	8.7
IX. Mathematics	14	0.9
(15) Mathematics	14	0.9
Other	6	0.4
(35) Other	6	0.4
	1500	

Q10B. Field of Task Output (Ungrouped)   Table 2-10

What was the field of the major output of the task?

		N	Percent
(1)	Aircraft and flight equipment	197	13.2
(2)	Astronomy, geophysics and geography	13	0.9
(3)	Chemical warfare equipment and materials	2	0.1
(4)	Chemistry	66	4.4
(5)	Communications	35	2.3
(6)	Detection	35	2.3
(7)	Electrical equipment	29	1.9
(8)	Electronics, electronic equipment	255	17.0
(9)	Fluid mechanics	44	2.9
(10)	Fuels and combustion	9	0.6
(11)	Ground transportation equipment	7	0.5
(12)	Guided Missiles	128	8.6
(13)	Installations and constructions	36	2.4
(14)	Materials (nonmetallic)	56	3.7
(15)	Mathematics	14	0.9
(16)	Medical sciences	33	2.2
(17)	Metallurgy	35	2.3
(18)	Military sciences and operations	21	1.4
(19)	Navigation	26	1.7
(20)	Nuclear physics and nuclear chemistry	8	0.5
(21)	Nuclear propulsion	3	0.2
(22)	Ordnance	13	0.9
(23)	Personnel and training	14	0.9
(24)	Photography and other reproductive processes	7	0.5
(25)	Physics	51	3.4
(26)	Production and management	102	6.8
(27)	Propulsion systems	74	5.0
(28)	Psychology and human engineering	17	1.1
(29)	Quartermaster equipment and supplies	0	0.0
(30)	Research and research equipment (including computer science)	131	8.8
(31)	Ships and marine equipment	18	1.2
(32)	Miscellaneous arts and sciences	10	0.7
(33)	Transportation	5	0.3
(35)	Other	6	0.4
		1500	

Q12. Actual Acquisition Time for Information   Table 2-11

How much time elapsed from the time you requested this chunk of information –
or from the time you started to search for it – until you got it?

			N	Percent
I.	(1)	From Recall	618	11.5
II.	(8)	Task generated	3	0.1
III.	(2)	Less than 1 day	1535	28.6
IV.	(3)	1 – 7 days	1203	22.5
V.	(4)	8 – 30 days	1007	18.8
VI.	(5)	More than 30 days	971	18.1
VII.	(7)	Received only part of chunk	22	0.4
			5359	

Q13. Desired Acquisition Time for Information   Table 2-12

From the time you requested this chunk or started to search for it, was
there a maximum elapsed time you could have allowed to get it?

			N	Percent
I.	(1)	From recall	382	7.1
II.	(2)	Less than 1 day	833	15.5
III.	(3)	1 – 7 days	1339	25.0
IV.	(4)	8 – 30 days	1418	26.5
V.	(5)	31 – 90 days	388	7.3
VI.	(7)	More than 90 days	999	18.6
			5359	

Q14. Location of First Source for Information   Table 2-13

How did you first go about getting this information chunk?

			N	Percent
I.	(1)	Received with task assignment	576	10.7
II.	(4)	Recalled it	1009	18.9
III.	(9)	Searched own collection	696	13.0
IV.	(19)	Respondent's action	136	2.5
V.	(3)	Asked subordinate to get it	236	4.4
VI.	(5)	Asked a colleague	769	14.3
VII.	(2)	Asked my supervisor	72	1.3
VIII.	(8)	Requested search of department files	297	5.5
IX.	(6)	Asked an internal company consultant	507	9.5
X.	(10)	Searched company TIC	399	7.4
X.	(7)	Requested library search	96	1.8
XI.	(15)	Requested data from manufacturer, vendor or supplier	235	4.4
XI.	(14)	Searched manufacturer, vendor or supplier sources	85	1.6
XII.	(11)	Searched outside library	31	0.6
XIII.	(18)	Asked an external consultant or expert	46	0.9
XIV.	(13)	Requested search of DOD information/data center	36	0.7
XIV.	(12)	Searched DOD information/data center	31	0.6
XV.	(17)	Asked customer	100	1.9
			5357	

Q15. Why First Source Used   Table 2-14

What is the main reason that you used this source first?

			N	Percent
I.	(1)	Received with task assignment	580	10.8
II.	(4)	Available, handy or easy to use	1426	26.6
III.	(6)	Found helpful previously	368	6.9
IV.	(3)	Most authoritative	1194	22.3
V.	(2)	Only source known	508	9.5
VI.	(5)	Recalled, or was told, that specific chunk was available from the source	1274	23.8
	(7)	Other	9	0.1
			5359	

Q16. Desired Class of Information*   Table 2-15

What question(s) did you want answered by this first source?

			N	Percent
I.	(15)	Requested information source	179	4.2
II.	(1)	Concepts	47	1.1
III.	(8)	Raw data	55	1.3
IV.	(5)	Math aids and formulae; computer programs	165	3.9
V.	(3)	Designs or design techniques	449	10.6
VI.	(4)	Experimental processes and procedures	36	0.8
VII.	(11)	Test processes and procedures	159	3.8
VIII.	(13)	Evaluation	186	4.4
IX.	(9)	Specifications	489	11.6
X.	(6)	Performance and characteristics	1224	28.9
XI.	(7)	Production processes and procedures	106	2.5
XII.	(10)	Technical status	524	12.4
XIII.	(12)	Utilization	187	4.4
XIV.	(2)	Cost and funding; administrative action	427	10.1
			4233*	

Q17. Acquisition From First Source   Table 2-16

What did you get from this first source?

			N	Percent
I.	(4)	Irrelevant or inappropriate information	37	0.7
II.	(5)	Nothing	59	1.1
III.	(3)	Reference to another source	236	4.4
IV.	(2)	Part of the information	2513	46.9
V.	(1)	All the information needed	2514	46.9
			5359	

*The narrative answers to the question were categorized according to class, so that Question 28 (Class of Information) would have a "desired" counterpart.

This categorization was applied to only the answers that corresponded to the first three information chunks.

Q18. Actual Composition of Transporting Medium Table 2-17

Would you describe the media by which you received this information chunk? If more than one medium was used, indicate the three most important, in order of importance.

			N	Percent
I.	(22)	Previous knowledge	1485	13.5
II.	(9)	Meetings and symposia	209	1.9
III.	(8)	Oral contacts - all other	2269	20.6
IV.	(7)	Oral contacts with manufacturers	425	3.8
V.	(15)	Live demonstrations	90	0.8
VI.	(25)	Physical measurement or experiment	298	2.7
VII.	(24)	Personal notes, logs and files	380	3.5
VIII.	(11)	Correspondence, memos and TWX	676	6.1
IX.	(4)	Drawings and schematics	571	5.2
X.	(20)	Photographs, maps and files	28	0.3
XI.	(5)	Parts lists	54	0.5
XII.	(23)	Computer printout	160	1.5
XIII.	(26)	Microfilm or microfiche	28	0.3
XIV.	(27)	Slides or motion pictures	13	0.1
XV.	(6)	System specification document	461	4.2
XVI.	(14)	Newsletters and other mass media	41	0.4
XVII.	(1)	Brochures	211	1.9
XVIII.	(2)	Catalogs	209	1.9
XIX.	(3)	Standards and Codes	118	1.1
XX.	(10)	Directives	86	0.8
XXI.	(12)	Handbooks	254	2.3
XXII.	(13)	Manuals	321	2.9
XXIII.	(17)	Proposals	134	1.2
XXIV.	(18)	Reports	1428	13.0
XXV.	(16)	Preprints and reprints	128	1.2
XXVI.	(21)	Journals	439	4.5
XXVII.	(19)	Textbooks	423	3.8
			10999 *	

*Many chunks have more than one media indicated.

Q19. Usual Composition of Transporting Medium   Table 2-18

What media do you use regularly to obtain this information chunk?

			N	Percent
I.	(3)	None indicated in Question 18	157	2.9
II.	(1)	Same as those indicated in Question 18	4295	80.2
III.	(2)	Same as those indicated in Question 18 and other media	907	16.9
			5359	

Q20. Desired Composition of Transporting Medium   Table 2-19

At the time you obtained this information chunk, would you rather have had it presented by any other medium? If more than one medium is indicated, record the three most important, in order of importance.

	N	Percent
No	4238	79.1
Yes	1121	20.9
	5359	

What were the media you would have rather received (including those actually received)?

			N	Percent
I.	(22)	Previous knowledge	1299	12.7
II.	(9)	Meetings and symposia	188	1.8
III.	(8)	Oral contacts - all other	1800	18.2
IV.	(7)	Oral contacts with manufacturer	333	3.3
V.	(15)	Live demonstrations	97	1.0
VI.	(25)	Physical measurement or experiment	232	2.3
VII.	(24)	Personal notes, logs and files	321	3.1
VIII.	(11)	Correspondence, memos and TWX	597	5.8
IX.	(4)	Drawings and schematics	527	5.2
X.	(20)	Photographs, maps and films	29	0.3
XI.	(5)	Parts Lists	50	0.5
XII.	(23)	Computer printout	182	1.8
XIII.	(26)	Microfilm or microfiche	38	0.4
XIV.	(27)	Slides or motion pictures	21	0.2
XV.	(6)	System specification document	479	4.7

Q20. Desired Composition of Transporting Medium

Table 2-19 (Continued)

			N	Percent
XVI.	(14)	Newsletters and other mass media	30	0.3
XVII.	(1)	Brochures	179	1.8
XVIII.	(2)	Catalogs	191	1.9
XIX.	(3)	Standards and codes	139	1.4
XX.	(10)	Directives	95	0.9
XXI.	(12)	Handbooks	290	2.8
XXII.	(13)	Manuals	379	3.7
XXIII.	(17)	Proposals	122	1.2
XXIV.	(18)	Reports	1581	15.5
XXV.	(16)	Preprints and reprints	112	1.1
XXVI.	(21)	Journals	455	4.4
XXVII.	(19)	Textbooks	381	3.7
			10207*	

Q21. Actual Volume of Transporting Medium

Table 2-20

When you received this chunk of information, did you get:

			N	Percent
I.	(4)	All from recall?	371	6.9
II.	(1)	One report or document ?	1365	25.5
III.	(2)	A sampling of the reports and documents available?	2033	38.0
IV.	(3)	All reports and documents that could be found pertinent to the question?	1575	29.4
V.	(4)	Did not receive chunk ?	13	0.2
	(5)	Other?	2	0.0
			5359	

*Many chunks have more than one media indicated.

Q22. Desired Volume of Transporting Medium   Table 2-21

For each information chunk, did you want:

			N	Percent
I.	(4)	All from recall ?	373	7.0
II.	(1)	One report or document ?	1625	30.3
III.	(2)	A sampling of the reports and documents available?	1154	21.5
IV.	(3)	All reports and documents that could be found pertinent to the question?	2205	41.2
	(5)	Other	2	0.0
			5359	

Q23A. Usefulness of Title Listings or Abstracts   Table 2-22

Would you comment on the usefulness of title listings or abstracts with regard to this chunk ?

			N	Percent
I.	(3)	Would not have been useful	3065	57.2
II.	(2)	Would have found them useful	1048	19.6
III.	(1)	Used them for this chunk	1246	23.2
			5359	

Q23B. Reason that Title Listings or Abstracts Would Not be Useful.   Table 2-23

Explain why title listings or abstracts would not have been useful.

		N	Percent
I.	Had the data or knew of its location	762	25.0
II.	Subject too specific for title listings or abstracts	511	16.7
III.	Information was recalled	395	12.9
IV.	No published or indexed information available	354	11.5
V.	Information was received from personal or oral contact	288	9.4
VI.	Received with task or from normal distribution procedure	206	6.7
VII.	Required raw data	78	2.6
VIII.	Takes too much time	64	2.1
IX.	Information was internally generated	57	1.8
X.	Not applicable - no reason given	350	11.4
		3065*	

Q24. Actual Detail of Transporting Medium   Table 2-24

For this information chunk did you get:

		N	Percent
I.	(1) A once over lightly?	952	17.8
II.	(3) A specific answer ?	2710	50.5
III.	(2) A detailed analysis ?	1697	31.7
		5359	

*Based on the 3065 information chunks for which the answer to Question 23 was "would not have been useful."

Q25. Desired Detail of Transporting Medium   Table 2-25

At the time you recognized the need for this information chunk, did you want:

			N	Percent
I.	(1) A once over lightly ?	393	7.3
II.	(3) A specific answer ?	2994	55.9
III.	(2) A detailed analysis ?	1972	36.8
			5359	

Q26. Actual Layout of Transporting Medium

Table 2-26

What was the physical layout of this chunk of information when you received it?

			N	Percent
I.	(14)	Recall	634	12.0
II.	(13)	Telephone conversation	124	2.3
III.	(11)	Group discussion	187	3.5
IV.	(4)	Photographs	8	0.2
V.	(3)	Graphics (diagrams, drawings, etc.)	413	7.8
VI.	(2)	Tables or lists	432	8.2
VII.	(1)	Narrative text	700	13.2
VIII.	(18)	Narrative text and tables or lists	58	1.1
IX.	(9)	Graphics and lists	138	2.6
X.	(8)	Photographs and text	51	1.0
XI.	(7)	Graphics and text	1400	26.4
XII.	(16)	Graphics, text and oral	466	3.8
XIII.	(17)	Graphics, text, oral and recall	195	3.7
XIV.	(12)	Informal briefing, with chalk or pencil drawings	465	8.8
XV.	(5)	Microfilm - microfiche	3	0.1
XVI.	(6)	Slides or motion pictures	4	0.1
XVII.	(10)	Formal briefing or lecture	17	0.3
	(15)	Other	61	1.1
			5359	

Q27. Desired Layout of Transporting Medium   Table 2-27

In what physical layout would you have wanted it?

			N	Percent
I.	(14)	Recall	603	11.3
II.	(13)	Telephone conversation	80	1.5
III.	(11)	Group discussion	139	2.5
IV.	(4)	Photographs	11	0.2
V.	(3)	Graphics (diagrams, drawings, schematics, flow charts, graphs, maps)	466	8.7
VI.	(2)	Tables or lists	477	8.9
VII.	(1)	Narrative text	734	13.7
VIII.	(18)	Narrative text and tables or lists	59	1.1
IX.	(9)	Graphics and lists	148	2.8
X.	(8)	Photographs and text	69	1.3
XI.	(7)	Graphics and text	1633	30.5
XII.	(16)	Graphics, text and oral	393	7.3
XIII.	(17)	Graphics, text, oral and recall	130	2.4
XIV.	(12)	Informal briefing, with chalk or pencil drawings	341	6.4
XV.	(5)	Microfilm - microfiche	10	0.2
XVI.	(6)	Slides or motion pictures	10	0.2
XVII.	(10)	Formal briefing or lecture	31	0.5
	(15)	Other	25	0.5
			5359	

Q28. Class of Information Table 2-28

What was the class of this chunk?

			N	Percent
I.		(Only used for Question 16, Desired Class of Information)		
II.	(1)	Concepts	378	7.1
III.	(8)	Raw data	372	6.9
IV.	(5)	Math aids and formulae; computer programs	387	7.2
V.	(3)	Designs or design techniques	547	10.2
VI.	(4)	Experimental processes and procedures	187	3.5
VII.	(11)	Test processes and procedures	235	4.4
VIII.	(13)	Evaluation	189	3.5
IX.	(9)	Specifications	813	15.2
X.	(6)	Performance and characteristics	1349	25.2
XI.	(7)	Production processes and procedures	224	4.2
XII.	(10)	Technical status	328	6.1
XIII.	(12)	Utilization	189	3.5
XIV.	(2)	Cost and funding; administrative action	160	3.0
	(14)	Other	1	0.0
			5359	

Q29A. Field of Information (Grouped) Table 2-29

What was the field of this chunk?

		N	Percent
I.	Production, Management and Social Sciences	617	11.5
	(32) Miscellaneous arts and sciences	55	1.0
	(23) Personnel and training	58	1.1
	(26) Production and management	437	8.1
	(28) Psychology and human engineering	67	1.3
II.	Medical Sciences	95	1.8
	(16) Medical sciences	95	1.8
III.	Mechanical, Industrial, Civil and Marine Engineering	355	6.6
	(11) Ground transportation equipment	31	0.6
	(13) Installations and constructions	146	2.7

Q29A. Field of Information

Table 2-29 (continued)

		N	Percent	
	(18) Military sciences and operations	86	1.6	
	(24) Photography and other reproductive processes	22	0.4	
	(29) Quartermaster equipment and supplies	4	0.1	
	(31) Ships and marine equipment	50	0.9	
	(33) Transportation	16	0.3	
IV.	Aeronautics and Space Technology		900	16.8
	(1) Aircraft and flight equipment	549	10.2	
	(12) Guided Missiles	305	5.7	
	(19) Navigation	46	0.9	
V.	Electronics and Electrical Engineering		1291	24.2
	(5) Communications	94	1.8	
	(6) Detection	96	1.8	
	(7) Electrical equipment	133	2.5	
	(8) Electronics, electronic equipment	968	18.1	
VI.	Chemical Science and Materials		712	13.2
	(3) Chemical warfare equipment	13	0.2	
	(4) Chemistry	234	4.4	
	(10) Fuels and combustion	43	0.8	
	(14) Materials (nonmetallic)	188	3.5	
	(17) Metallurgy	169	3.1	
	(22) Ordnance	65	1.2	
VII.	Physical Science		747	13.9
	(2) Astronomy, geophysics and geography	64	1.2	
	(9) Fluid mechanics	157	2.9	
	(20) Nuclear physics and nuclear chemistry	34	0.6	
	(21) Nuclear propulsion	5	0.1	
	(25) Physics	264	4.9	
	(27) Propulsion systems	223	4.2	
VIII.	Research and Research Equipment		448	8.4
	(30) Research and research equipment (including computer science)	448	8.4	
IX.	Mathematics		169	3.2
	(15) Mathematics	169	3.2	
	(35) Other	25	25	0.4	0.4
		5359		

Q29B. Field of Information (Ungrouped)   Table 2-30

What was the FIELD of this chunk?

		X	Percent
(1)	Aircraft and flight equipment	549	10.2
(2)	Astronomy, geophysics and geography	64	1.2
(3)	Chemical warfare equipment and materials	13	0.2
(4)	Chemistry	234	4.4
(5)	Communications	94	1.8
(6)	Detection	96	1.8
(7)	Electrical equipment	133	2.5
(8)	Electronics, electronic equipment	968	18 0
(9)	Fluid mechanics	157	2.9
(10)	Fuels and combustion	43	0.8
(11)	Ground transportation equipment	31	0.5
(12)	Guided Missile	305	5.7
(13)	Installations and constructions	146	2.7
(14)	Materials (nonmetallic)	188	3.5
(15)	Mathematics	169	3.2
(16)	Medical sciences	95	1.8
(17)	Metallurgy	169	3.1
(18)	Military sciences and operations	86	1.6
(19)	Navigation	46	0.9
(20)	Nuclear physics and nuclear chemistry	34	0.6
(21)	Nuclear propulsion	5	0.1
(22)	Ordnance	65	1.2
(23)	Personnel and training	58	1.1
(24)	Photography and other reproductive processes	22	0.4
(25)	Physics	264	4.9
(26)	Production and management	437	8.2
(27)	Propulsion systems	223	4.2
(28)	Psychology and human engineering	67	1.3
(29)	Quartermaster equipment and supplies	4	0.1
(30)	Research and research equipment (including computer science)	448	8.4
(31)	Ships and marine equipment	50	0.9
(32)	Miscellaneous arts and sciences	55	1.0
(33)	Transportation	16	0.3
(35)	Other	25	0.5
		5359	

Q30. Essentially of Information to Task   Table 2-31

How essential was this information chunk to the task?

		N	Percent
I.	(4) Neither essential nor helpful to successful task completion	27	0.5
II.	(3) Not essential, but somewhat helpful to successful task completion	235	4.4
III.	(2) Not essential, but extremely helpful to successful task completion	910	17.0
IV.	(1) Absolutely essential to successful task completion	4187	78.1
		5359	

Q31. Extensiveness of Information use in Task   Table 2-32

To what extent was this information chunk used in the task?

		N	Percent
I.	(6) Not at all	38	0.7
II.	(5) As a lead to other information	47	0.9
III.	(4) As background information	617	11.5
IV.	(3) In only small parts of the task	623	11.6
V.	(2) In major portions of the task	1836	34.3
VI.	(1) Throughout the entire duration of the task	2198	41.0
		5359	

Q32. Discovery of Information Available, but Unknown, during Task   Table 2-33

After you finished the total TASK, did you learn of any relevant information
that was available but unknown to you while you were doing the task?

		N	Percent
I.	(2) No	1196	79.7
II.	(1) Yes	304	20.3
		1500	

Q33. Existence of Company Technical Information Center (TIC)   Table 2-34

Does your company have a technical information center or similar library
facility?

		N	Percent
II.	(1) Yes	1489	99.3
I.	(2) No	6	0.4
I.	(3) Not sure	5	0.3
		1500	

Q34. Known Company TIC Services   Table 2-35

What services, facilities and documents does your company information center have?

			N*	Percent
I.	(10)	Not familiar with company information center	67	4.5
II.	(3)	Acquisition lists	1138	76.4
III.	(4)	Awareness/special interest service/SDI	546	36.7
IV.	(5)	Information retrieval (search) service	1101	73.9
V.	(7)	Library telephone checkout service	648	43.5
VI.	(1)	Bibliography service	958	64.3
VII.	(2)	Abstract service	762	51.2
VIII.	(8)	Micro-form and associated reader-printer services (e.g., microfilm, microfiche, aperture cards, etc.)	1000	67.2
IX.	(6)	Films and projection service	724	48.6
X.	(9)	Translation, book purchasing, reproduction, etc.	132	8.9

*Based upon an N of 1489 for each response, only eleven did not know of TIC.

Q35. Use of Company TIC   Table 2-36

How often do you use your company information center?

			N	Percent
I.	(4)	Never	71	4.8
II.	(3)	Only on an as-needed basis	400	26.9
III.	(2)	Regularly - infrequently (once a month)	217	14.5
IV.	(1)	Regularly - frequently (twice or more a month)	801	53.8
			1489*	

*Based on only 1489 users, as eleven did not know of TIC.

Q36. Evaluation of Company TIC

How would you categorize or describe your company information center as to its satisfaction of your information/data needs?

			N	Percent
I.	(5)	Never use information center	89	6.0
II.	(3)	Center is too far from my work location	58	3.9
III.	(2)	Seldom get what is needed	177	11.9
IV.	(4)	Takes too long to get available information	136	9.1
V.		Entire TIC incomplete	21	1.4
VI.		Material coverage inadequate	80	5.4
VII.		Structure and mechanics poor	21	1.4
VIII.		Personnel inadequate	8	0.5
IX.		Services inadequate	27	1.8
X.	(1)	Almost always find needed information	872	58.6
			1489*	

Q37. Use of TAB

Table 2-38

How often do you see or read TAB (Technical Abstract Bulletin)?

			N	Percent
I.	(5)	Do not know of TAB	649	43.3
II.	(4)	Never	325	21.7
III.	(3)	About once every 6 months	203	13.5
IV.	(2)	Once every 2 or 3 months	117	7.8
V.	(1)	Every issue or almost every issue	206	13.7
			1500	

*Based on only 1489 users, as eleven did not know of TIC.

Q38. Use of STAR   Table 2-39

How often do you see or read STAR (Scientific and Technical Aerospace Reports)?

		N	Percent
I.	(5) Do not know of STAR	955	63.6
II.	(4) Never	269	17.9
III.	(3) About once every 6 months	112	7.5
IV.	(2) Once every 2 or 3 months	70	4.7
V.	(1) Every issue or almost every issue	94	6.3
		1500	

Q39. Use of DDC   Table 2-40

Do you use DDC (Defense Documentation Center) (ASTIA)?

		N	Percent
I.	(3) Do not know of DDC	473	31.5
II.	(2) Know of DDC, but do not use it	240	16.0
II.	(5) Use other sources instead	85	5.7
II.	(4) Not relevant	23	1.5
III.	(1) Yes, including own library going to DDC	679	45.3
		1500	

Q40A. Use of DOD Specialized Information Centers   Table 2-41

Of the DOD specialized information and data centers shown on the following list, which one do you use most often?

			N	Percent
I	(29)	Do not know of such centers	549	36.6
II.	(31)	Use other sources instead	190	12.7
II.	(30)	Not relevant	100	6.7
III.	(1-28)	Use centers	661	44.0
			1500	

Q40B. Use of DOD Specialized Information Centers, by Center   Table 2-42

Of the DOD specialized information and data centers shown on the following list, which one do you use most often?

		N	Percent
(1)	Chemical Propulsion Information Agency	44	6.6
(2)	DASA Data Center	13	2.0
(3)	Infrared Information and Analysis Center	43	6.5
(4)	National Oceanographic Data Center	21	3.2
(5)	Vela Seismic Information Analysis Center	6	0.9
(6)	Hibernation Information Exchange	2	0.3
(7)	Military Entomology Information Service	1	0.1
(8)	Human Engineering Information and Analysis Service	20	3.0
(9)	Binary Information Service	4	0.6
(10)	Ceramics and Graphite Information Center	8	1.2
(11)	Defense Metals Information Center	111	16.8
(12)	Electronic Properties Information Center	14	2.1
(13)	Mechanical Properties Data Center	3	0.5
(14)	Plastics Technical Evaluation Center	17	2.5
(15)	Radiation Effects Information Center	54	8.2
(16)	Thermophysical Properties Research Center	15	2.3
(17)	Shock and Vibration Information Center	43	6.5
(18)	Nondestructive Testing Information Analysis Center	9	1.4
(19)	Ballistic Missile Radiation Center	12	1.8

Q40B.   Use of DOD Specialized Information Centers, by Center   Table 2-42
                                                                       (Continued)

		N	Percent
(20)	Battelle-Defender Information Analysis Center	23	3.5
(21)	Counter-Insurgency Information Analysis Center	3	0.5
(22)	Remote Area Conflict Information Center	6	0.9
(23)	Defense Logistics Studies Information Exchange	4	0.6
(24)	Interservices Data Exchange Program	109	16.5
(25)	Index of Specifications and Standards	61	9.2
(26)	Secretariat for Electronic Test Equipment	3	0.5
(27)	Advisory Group for Electron Devices	7	1.1
(28)	Parts Reliability Information Center	5	0.7
		661*	

Q41.   Use of Other Specialized Information Centers   Table 2-43

Do you use any specialized information and/or data centers other than those listed?

		N	Percent
I.	(2) No	1047	69.8
II.	(1) Yes	453	30.2
		1500	

*Based on the 661 users for which the answer to Question 40A was "use centers."

Q42. Encounter of Restriction

Table 2-44

Have you encountered any special restrictions which made it difficult to obtain information needed in your work?

			N	Percent
I.	(2)	No	975	65.0
II.	(1)	Yes	525	35.0
			1500	

Q43. Nature of Restrictions

Table 2-45

What was the nature of the restriction(s)?

	N	Percent
I. (1) Proprietary		
Unwillingness of vendors to supply drawings and information - fear of commercial competition	77	17.0
Vendors reluctant to provide failure analysis reports	9	2.0
Unwillingness of other companies to supply company classified information	38	8.4
Other companies very jealous of technical processes	16	3.5
Other companies jealous of "developmental" data	6	1.3
"Primes" reluctant to release proprietary information when they sub-contract	3	0.7
Proprietor's reports are evasive and furnish insufficient data	3	0.7
Other companies refuse information on materials composition	3	0.7
"Specs" not available from other companies	1	0.2
Proprietary restrictions preclude knowing what information to request	3	0.7
Government funded programs withheld as proprietary	13	2.9
Limited documents very difficult to obtain.	8	1.8
Miscellanous	4	0.9
Total (I)	184	40.8

Q43. Nature of Restriction(s)?   Table 2-45
(Continued)

	N	Percent
II. (2) Industrial (Government) Security		
Not having proper need to know	75	16.5
Takes too long to establish need to know	33	7.5
Administrative procedures make it difficult to establish need to know	27	6.0
Establishing need to know too burdensome - decided not to pursue any further	9	2.0
Difficulty in justifying need to know to DOD contracting officer	6	1.3
Can't acquire information to submit unsolicited proposal because of need to know restriction	4	0.9
Establishment of need-to-know jeopardizes competitive position of company	1	0.2
Documents seem to be over-classified	10	2.2
Unable to get cleared at proper level	9	2.0
Security requirements keep documents in dark	8	1.8
Difficulty in getting data because of restrictions imposed by (a) DOD and Military Services		7.5
(b) NASA, AEC and STATE		3.1
Intelligence data almost impossible to obtain	4	0.9
Classified documents take too long to get	33	7.5
Total (II)	267	59.2
Total (I)	184	40.8
	451*	100.0

*Based on the 451 appropriate narrative answers, of the 525 answers to the question from the users for which the answer to Question 42 was "yes." Those two-way frequency distributions involving Q43 are based on the 525 non-narrative answers to the questions which are not as accurate as the narrative answers.

Q44. Use of English Abstracts or Translations   Table 2-46

Do you use English translations or English abstracts of foreign literature?

			N	Percent
I.	(2)	No	904	60.3
II.	(1)	Yes	596	39.7
			1500	

Q45. Encounter of Difficulties   Table 2-47

    With respect to all the tasks you have worked on over the last year, did you have any difficulty obtaining or locating technical information needed to perform or complete these tasks?

			N	Percent
I.	(2)	No	861	57.4
II.	(1)	Yes	639	42.6
			1500	

Q46. Nature of Difficulties   Table 2-48

Would you explain the difficulty?

		N	Percent
I.	Utility of Information	48	7. 6
	Internal to Company		1. 0
	External to Company		4. 0
	Both		2. 6
II.	Timely Acquisition of Information	334	53. 2
	Internal to Company		16. 6
	External to Company		27. 6
	Both		9. 0
III.	Timely Awareness of Information	246	39. 2
	Internal to Company		13. 4
	External to Company		13. 5
	Both		12. 4
	Other	11	
		639*	

*Based on the 639 users for which the answer to Question 45 was "yes."

Q47. Solutions for Difficulties *   Table 2-49

Can you offer a possible solution to the problem?

		N	Percent
I.	Implementation of Available Procedures or Administrative Action	80	17.2
II.	Publicity and Training	36	7.7
III.	More Professional Contact	19	4.1
IV.	Improvement of Subject Reporting and Coverage	35	7.5
IV.	Improvement of Subject	18	3.9
IV.	Improvement of Organization of Subject Data or Documentation	11	2.4
V.	Improvement of Indexing, Abstraction and Classification	90	19.3
VI.	Use of Periodic Workshops Information Centers, Clearing Houses, Symposium or Other Central Source for Information	109	23.4
VII.	Improvement of Dissemination Techniques	17	3.6
VII.	Improvement of Dissemination by Making more Copies of Documentation Available	16	3.4
VII.	Improvement of Dissemination by Reducing Lag Time	11	2.4
VIII.	Use of Automatic Data Processing	24	5.1
	Total	466*	

*These solutions apply to the difficulties indicated in Question 46.
Based on the 466 users who offered solutions, out of the 628 users
indicating appropriate difficulties in Question 46.

Q48. User's Year of Birth/Age   Table 2-50

In what year were you born?

	Year of Birth	Age	N	Percent
I.	1896 – 1905	60 – 69	18	1.2
II.	1906 – 1915	50 – 59	141	9.4
III.	1916 – 1925	40 – 49	463	30.9
IV.	1926 – 1935	30 – 39	666	44.4
V.	1936 – 1945	20 – 29	212	14.1
			1500	

Q49. Number of Personnel Supervised by User   Table 2-51

How many technical personnel do you supervise?

		N	Percent
	None	604	40.3
I.	1 – 5	471	31.4
II.	6 – 10	202	13.5
III.	11 – 15	61	4.1
IV.	16 – 20	34	2.3
V.	21 – 25	26	1.7
VI.	26 – 30	21	1.4
VII.	31 – 35	13	0.9
VIII.	36 – 40	7	0.5
IX.	41 – 45	6	0.4
X.	46 – 50	8	0.5
XI.	51 – 75	18	1.2
XII.	76 – 100	9	0.6
XIII.	101 – 200	13	0.8
XIV.	More than 200	7	0.4
		1500	

Q50A. User's Highest Degree   Table 2-52

What is your highest college degree?

			N	Percent
I.	(6)	None	195	13.1
II.	(1)	Associate's	28	1.9
III.	(2)	Bachelor's	798	53.2
IV.	(3)	Master's	296	19.7
V.	(4)	Professional (EdD LLB, Engr)	26	1.7
VI.	(5)	Doctors	157	10.4
			1500	

Q50B. Year of User's Highest Degree   Table 2-53

When did you get your highest degree?

		N	Percent
I.	1921 – 1925	2	0.2
II.	1926 – 1930	17	1.3
III.	1931 – 1935	29	2.2
IV.	1936 – 1940	70	5.4
V.	1941 – 1945	75	5.8
VI.	1946 – 1950	205	15.7
VII.	1951 – 1955	285	21.8
VIII.	1956 – 1960	343	26.3
IX.	1961 – 1965	278	21.3
		*1304	

*Based on the 1304 users for which the answer to Question 50A was
other than "none."

Q50C. Field of User's Highest Degree

In what field is your highest degree?

Table 2-54

		N	Percent
I. No degree		196	13.1
(00) No degree			
II. Behavioral and Social Sciences		88	5.9
(01) Arts	1	0.1	
(17) Business and Business Administration	27	1.8	
(40) Economics	6	0.4	
(41) Education	9	0.6	
(01) English	3	0.2	
(01) General Studies	1	0.1	
(45) Geography	1	0.1	
(44) History	4	0.2	
(01) Journalism	2	0.1	
(01) Languages	2	0.1	
(43) Law	3	0.2	
(01) Library Science	1	0.1	
(01) Philosophy	1	0.1	
(42) Political Science	6	0.4	
(06) Psychology	19	1.3	
(46) Sociology	2	0.1	
III. Biological and Medical Sciences		26	1.7
(02) Biology	6	0.4	
(27) Dentistry	1	0.1	
(39) Medicine	11	0.7	
(35) Pharmacy	1	0.1	
(31) Physiology	4	0.2	
(39) Public Health	1	0.1	
(38) Zoology	2	0.1	
IV. Agriculture and Agricultural Engineering (27 and 34)		2	0.1
V. General Engineering		48	3.2
(07) Engineering Management	5	0.3	
(07) General Engineering	26	1.8	
(12) Industrial Engineering	15	1.0	
(24) Systems Engineering	2	0.1	

Q50C. Field of User's Highest Degree

Table 2-54
(Continued)

	N	Percent
VI. Civil Engineering	35	2.4
(26) Architectural Engineering	1	0.1
(10) Civil Engineering	32	2.1
(15) Military Science	1	0.1
(10) Naval Architectural Engineering	1	0.1
VII. Mechanical Engineering	229	15.3
(25) Automotive Engineering	2	0.1
(13) Engineering Mechanics	2	0.1
(21) Maintenance Engineering	1	0 1
(13) Marine Engineering	1	0.1
(13) Mechanical Engineering	223	14.9
VIII. (09) Chemical Engineering	63	4.2
IX. Aeronautical Engineering	116	7.7
(20) Aeronautical Engineering	96	6.4
(08) Aeronautics	6	0.4
(08) Aerospace Engineering	14	0.9
X. (11) Electrical Engineering	332	22.1
XI. (03) Chemistry	109	7.3
XII. Earth Sciences	38	2.6
(23) Ceramic Engineering	5	0.3
(33) Geology and Mineralogy	9	0.6
(36) Geophysics	1	0.1
(14) Metallurgy and Metallurgical Engineering	21	1.4
(14) Mining Engineering	1	0.1
(22) Petroleum Engineering	1	0.1
XIII. Physical Science	137	9.0
(16) Applied Science	2	0.1
(18) Engineering Science	5	0.3
(16) General Science	4	0.2
(32) Meteorology and Astronomy	2	0.1
(05) Physics	124	8.3
XIV. (04) Mathematical Science	81	5.4
	1500	

Q51. Job Experience of User   Table 2-55

About how long have you been doing your present kind of work?

		N	Percent
I.	0 - 5 years	480	32.0
II.	6 - 10 years	438	29.2
III.	11 - 15 years	296	19.7
IV.	16 - 20 years	154	10.2
V.	21 - 25 years	70	4.7
VI.	26 - 30 years	40	2.7
VII.	More than 30 years	22	1.5
		1500	

Q52. Company Experience of User   Table 2-56

About how long have you been associated with this company?

		N	Percent
I.	0 - 5 years	488	32.5
II.	6 - 10 years	487	32.5
III.	11 - 15 years	308	20.5
IV.	16 - 20 years	124	8.3
V.	21 - 25 years	49	3.3
VI.	26 - 30 years	31	2.0
VII.	More than 30 years	13	0.9
		1500	

Q54. Type of Work Activity   Table 2-57

In what TYPE of activity are you primarily engaged?

			N	Percent
I.	(5)	Technical evaluation	183	12.2
II.	(4)	Scientific and engineering (nonmanagement)	823	54.9
III.	(2)	Technical management	171	11.4
IV.	(1)	Administrative management	28	1.9
V.	(3)	Both administrative and technical management	295	19.6
			1500	

Q55. Kind of Work Position   Table 2-58

What kind of work do you do?

			N	Percent
I.	(2)	Research – basic	65	4.3
II.	(1)	Research – applied	244	16.3
III.	(11)	System analysis	149	9.9
IV.	(3)	Development – advanced	146	9.7
V.	(4)	Development – engineering	282	18.8
VI.	(5)	Development – operational system	139	9.3
VII.	(6)	R&D support	151	10.1
VIII.	(7)	Test or evaluation	123	8.2
IX.	(8)	Production processes	69	4.6
X.	(9)	Production end-items	42	2.8
XI.	(10)	Reliability or quality control	63	4.2
XII.	(12)	Customer relations	26	1.7
	(13)	Other	1	0.1
			1500	

Q56A. Field of Work Position (Grouped)   Table 2-59

What is the field of your work?

	N	Percent
I. Production, Management and Social Sciences	159	10.6
(32) Miscelianeous arts and sciences	17	1.1
(23) Personnel and training	10	0.7
(26) Production and management	120	8.0
(28) Psychology and human engineering	12	0.8
II. Medical Sciences	30	2.0
(16) Medical sciences	30	2.0
III. Mechanical, Industrial, Civil and Marine Engineering	84	5.6
(11) Ground transportation equipment	5	0.3
(13) Installations and constructions	31	2.1
(18) Military sciences and operations	31	2.1
(24) Photography and other reproduction processes	2	0.1
(29) Quartermaster equipment and supplies	0	0.0
(31) Ships and marine equipment	12	0.8
(33) Transportation	3	0.2
IV. Aeronautics and Space Technology	333	22.5
(01) Aircraft and flight equipment	208	13.9
(12) Guided Missiles	106	7.1
(19) Navigation	22	1.5
V. Electronics and Electrical Engineering	400	26.7
(05) Communications	24	1.6
(06) Detection	14	0.9
(07) Electrical equipment	28	1.9
(08) Electronics, electronic equipment	334	22.3
VI. Chemical Science and Materials	159	10.6
(03) Chemical warfare equipment and materials	3	0.3
(04) Chemistry	74	4.9
(10) Fuels and combustion	6	0.4
(14) Materials (nonmetallic)	39	2.6
(17) Metallurgy	23	1.5
(22) Ordnance	14	0.9
VII. Physical Science	187	12.4
(02) Astronomy, geophysics and geography	12	0.8
(09) Fluid mechanics	29	1.9
(20) Nuclear physics and nuclear chemistry	10	0.7
(21) Nuclear propulsion	2	0.1
(25) Physics	60	4.0
(27) Propulsion systems	74	4.9
VIII. Research and Research Equipment	114	7.6
(30) Research and research equipment (including computer science)	114	7.6
IX. Mathematics	27	1.8
(15) Mathematics	27	1.8
Other	4	0.2
(35) Other	4	0.2
	1500	

Q56B.   Field of Work Position   (Ungrouped)   Table 2-60

What is the FIELD of your work?

	N	Percent
(1) Aircraft and flight equipment	208	13.9
(2) Astronomy, geophysics and geography	12	0.8
(3) Chemical warfare equipment and materials	3	0.3
(4) Chemistry	74	4.9
(5) Communications	24	1.6
(6) Detection	14	0.9
(7) Electrical equipment	28	1.9
(8) Electronics, electronic equipment	334	22.3
(9) Fluid mechanics	29	1.9
(10) Fuels and combustion	6	0.4
(11) Ground transportation equipment	5	0.3
(12) Guided Missiles	106	7.1
(13) Installations and constructions	31	2.1
(14) Materials (nonmetallic)	39	2.6
(15) Mathematics	27	1.8
(16) Medical sciences	30	2.0
(17) Metallurgy	23	1.5
(18) Military sciences and operations	31	2.1
(19) Navigation	22	1.5
(20) Nuclear physics and nuclear chemistry	10	0.7
(21) Nuclear propulsion	2	0.1
(22) Ordnance	14	0.9
(23) Personnel and training	10	0.7
(24) Photography and other reproductive processes	2	0.1
(25) Physics	60	4.0
(26) Production and management	120	8.0
(27) Propulsion systems	74	4.9
(28) Psychology and human engineering	12	0.8
(29) Quartermaster equipment and supplies	0	0.0
(30) Research and research equipment (including computer science)	114	7.6
(31) Ships and marine equipment	12	0.8
(32) Miscellaneous arts and sciences	17	1.1
(33) Transportation	3	0.2
(35) Other	4	0.2
	1500	

Q57. User's Job Description   Table 2-61

Description of respondent's job:

MOS	Description	N	Percent
0015	Operations Research	16	1.1
0101	Social Science	2	0.1
0110	Economist	5	0.3
0131	International Relations	2	0.1
0132	Intelligence	4	0.3
0170	History	1	0.1
0180	Psychology	18	1.2
0201	Personnel Administration	1	0.1
0222	Occupational Analysis	1	0.1
0330	Digital Computer Systems Administration	12	0.8
0331	Digital Computer Programming	41	2.7
0332	Digital Computer Systems Operation	7	0.4
0333	Peripheral Computer Equipment Operation	5	0.3
0334	Digital Computer Systems Analysis	29	1.9
0340	Program Management	45	3.0
0341	Administrative Assistant and Officer	9	0.6
0393	Communications Specialist	1	0.1
0401	Biology	5	0.3
0403	Microbiology	1	0.1
0413	Physiology	3	0.2
0525	Accounting Technician	1	0.1
0602	Medical Officer	9	0.6
0615	Public Health Nurse	1	0.1
0660	Pharmacist	1	0.1
0680	Dental Officer	1	0.1
0801	General Engineering	58	3.9
0802	Engineering Technician	77	5.1
0803	Safety Engineering	2	0.1
0805	Maintenance	2	0.1
0806	Materials Engineering	11	0.7
0809	Construction Inspection	2	0.1
0810	Civil Engineering	5	0.3

Q57.   User's Job Description

Table 2-61
(Continued)

MOS	Description	N	Percent
0811	Construction Engineering	3	0.2
0812	Structural Engineering	5	0.3
0818	Engineering Drafting	2	0.1
0830	Mechanical Engineering	82	5.5
0840	Nuclear Engineering	3	0.2
0850	Electrical Engineering	23	1.5
0855	Electronic Engineering	250	16.7
0856	Electronic Technician	21	1.4
0861	Aerospace Engineering	340	22.7
0870	Marine Engineering	7	0.4
0871	Naval Architecture	1	0.1
0881	Petroleum Production and Natural Gas Engineering	1	0.1
0892	Ceramic Engineering	5	0.3
0893	Chemical Engineering	38	2.4
0896	Industrial Engineering	19	1.3
0897	Valuation Engineering	1	0.1
1001	General Arts and Information	2	0.1
1083	Technical Writing and Editing	7	0.4
1101	General Business and Industry	18	1.2
1102	Contract and Procurement	7	0.5
1103	Industrial Property Administration	1	0.1
1140	Trade Specialist	1	0.1
1150	Industrial Specialist	4	0.3
1152	Production Control	24	1.6
1220	Patent Administration	1	0.1
1222	Patent Attorney	1	0.1
1310	Physics	68	4.5
1311	Physical Science Technician	1	0.1
1313	Geophysics	5	0.3
1320	Chemistry	79	5.3
1321	Metallurgy	18	1.2
1330	Astronomy and Space Science	2	0.1
1340	Meteorology	1	0.1
1350	Geology	2	0.1
1360	Oceanography	1	0.1

Q57.　User's Job Description

Table 2-61
(Continued)

MOS	Description	N	Percent
1410	Librarian	6	0.4
1520	Mathematics	18	1.2
1529	Mathematical Statistician	3	0.2
1530	Statistician	2	0.1
1701	General Education and Training	1	0.1
1710	Educational and Vocational Training	1	0.1
1712	Instruction	1	0.1
1720	Educational Research and Program	2	0.1
1901	General Commodities Quality Control and Inspection	3	0.2
1903	Quality Control and Inspection Management	14	0.9
1915	Chemical Quality Control and Inspection	2	0.1
1920	Materials Quality Control and Inspection	1	0.1
1936	Electronic Equipment Quality Control and Inspection	10	0.7
1942	Aircraft Quality Control and Inspection	1	0.1
1950	Missile Quality Control and Inspection	1	0.1
1955	Space System Quality Control	7	0.4
1961	Calibration and Measurement Quality Control and Inspection	1	0.1
2090	Publications Supply	1	0.1
2101	General Transportation	1	0.1
2150	Transportation Operations	2	0.1
		1500	

Q58. User's Equivalent Government Service (GS) Rating   Table 2-62

What is your equivalent GS rating?

				N	Percent
I.	(01)	GS-6	(under 6,000)	0	0.0
II.	(02)	GS-9	(6,000 - 7,999)	28	1.9
III.	(03)	GS-11	(8,000 - 10,249)	258	17.2
IV.	(04)	GS-12	(10,250 - 11,999)	289	19.2
V.	(05)	GS-13	(12,000 - 13,999)	286	19.0
VI.	(06)	GS-14	(14,000 - 16,499)	294	19.6
VII.	(07)	GS-15	(16,500 - 18,999)	184	12.3
VIII.	(08)	GS-16	(19,000 - 20,999)	70	4.7
IX.	(09)	GS-17	(21,000 - 23,999)	49	3.3
X.	(10)	GS-18	(24,000 - 26,999)	25	1.7
XI.	(11)	Sp A	(27,000 - 29,999)	8	0.5
XII.	(12)	Sp B	(30,000 - 34,999)	5	0.3
XIII.	(13)	Sp C	(over 35,000)	4	0.3
				1500	

Q59. Interviewer's Assessment of User's Information Needs   Table 2-63

How would you, the interviewer, characterize the respondent's need for external scientific and technical information and data?

			N	Percent
I.	(3)	Insignificant need	290	19.3
II.	(2)	Moderate need	728	48.6
III.	(1)	Large need	482	32.1
			1500	

Q61. Interviewer's Assessment of Difficulty in use of Information   Table 2-64

At the beginning of the task described in response to Question 1, was the choice
of method or procedure for using the needed information:

		N	Percent
I.	(1) Obvious or prescribed?	244	16.3
II.	(2) Entirely or largely independent of professional judgment?	179	11.9
III.	(3) Entirely or largely dependent upon professional judgment?	973	64.9
IV.	(4) Difficult, because methods and procedures were lacking ?	104	6.9
		1500	

Q62. Interviewer's Assessment of Difficulty   Table 2-65
        in Acquisition of Information

When the respondent started the task described in response to Question 1, was
a suitable method or procedure of obtaining needed information:

		N	Percent
I.	(1) Quite clear or obvious?	498	33.2
II.	(2) Fairly clear or obvious?	765	51.0
III.	(3) Neither clear nor obvious ?	237	15.8
		1500	

Q63. Interviewer's Assessment of Task Creativity   Table 2-66

Would you consider the output of the task:

			N	Percent
I.	(1)	Communication of existing information ?	55	3.7
II.	(2)	Rearrangement of existing information, with little evaluation or analysis ?	283	18.9
III.	(3)	Extensive evaluation and analysis of existing data?	548	36.5
IV.	(4)	Creation of new information, systems or hardware	614	40.9
			1500	

3. TWO-WAY FREQUENCY DISTRIBUTIONS

3.1 INTERPRETATION

See Appendix 15 of Volume II and Reference 5 for a description of BMD 08D, the computer program employed for the compilation of frequency distributions.

The distribution of the percent of answers to a pair of questions that corresponds to each pair of question responses is called a two-way frequency distribution. The following illustration provides a guide to the two-way frequency distributions in this report.

Illustration: Q13 vs Q9 (See Figure 3-1)

⟨1⟩   Q13 is cross tabulated with Q9: Question 13's responses are listed vertically and identified at the left of the table. Question 9's responses are listed horizontally and identified at the bottom of the table.

⟨2⟩   Variable 2 is cross tabulated with Variable 1: The computer assigned Q13 and Q9 to be Variable 2 and Variable 1, respectively.

⟨3⟩   Number of Replications, 5359: Number of cases (answers) considered by the computer as controlled by input specifications.

⟨4⟩   Variable Maximum and Minimum (as specified): The column of numbers to the extreme left indicates the two variables, Q13 (Variable 2) and Q9 (Variable 1). The other columns snow the maximum and minimum limits established by computer input specifications. These limits may reduce the number of cases for a two-way frequency distribution.

⟨5⟩   (2): Refers to the computer assigned Variable 2 for Q13. See ⟨2⟩ above.

⟨6⟩   Q13: It is Variable 2. The displayed figures in the table represent the cross tabulated results with Variable 1, Q9. See ⟨1⟩ above.
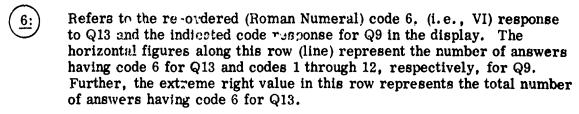
⟨7⟩   (1): Refers to the computer assigned Variable 1 for Q9. See ⟨2⟩ above.

⟨8⟩   Q9: It is Variable 1. The displayed figures in the table represent the cross tabulated results with Variable 2, Q13. See ⟨1⟩ above.

⟨9⟩   Table Characteristics

     6: Refers to the re-ordered (Roman Numeral) code 6, (i.e., VI) response to Q13 and the indicated code response for Q9 in the display. The horizontal figures along this row (line) represent the number of answers having code 6 for Q13 and codes 1 through 12, respectively, for Q9. Further, the extreme right value in this row represents the total number of answers having code 6 for Q13.

     86: Indicates that 86 information chunks had responses of code 6 for Q13 and code 1 for Q9, respectively. The figure "1", indicating code 1, is

found at the foot of the column. The count of 86 is the cell frequently meeting the double condition of code 6 response for Q13 and code 1 response for Q9.

T: Identifies this row of figures as the percentage that the corresponding cell frequency is of the GRAND TOTAL for the distribution.

2: Indicates that the cell frequency count of 86 is 2 percent of the GRAND TOTAL of 5,354.

R: Identifies this row of figures as the percentage that the corresponding cell frequency is of the ROW TOTAL. The ROW TOTAL for Q13, code 6 is 998.

9: Indicates that the cell frequency of 86 is 9 percent of the ROW TOTAL of 998.

C: Identifies this row of figures as the percentage that the corresponding cell frequency is of the COLUMN TOTAL. The COLUMN TOTAL for Q9, code 1 is 219.

39: Indicates that the cell frequency of 86 is 39 percent of the COLUMN TOTAL of 219.

998 Represents the ROW TOTAL entry count for Q13, code 6.

19: It is the sum of the percentages in the T row, which is the same as the percentage that the ROW TOTAL is of the GRAND TOTAL.

100: It is the sum of the percentages in the R row, which is 100 by definition.

19: It is the percentage that the ROW TOTAL is of the GRAND TOTAL, which is the same as the sum of the percentages in the T row.

219 Represents the COLUMN TOTAL entry count for Q9, code 1.

4: It is both the sum of the percentages in the T column, and the percentage that the COLUMN TOTAL is of the GRAND TOTAL.

◇10 Grand Total: Total sample size (or cases) for Q13 vs Q9.

◇11 Chi-Square (of Table) and df: As a function of its degrees of freedom (df), Chi-Square measures the departure of the corresponding answers, to the two questions, from being independent.

◇12 Values Not Entered 5: Represents the five cases not entered into the total count. If the number of cases deleted by the computer is greater than 50, the missing cases will not be listed.

◇13 Case No.: It is the sequential entry number assigned by the computer and does not mean the Interview Guide Identification Number.

⟨14⟩ Correlation Coefficient: Measures the degree of linear relationship between corresponding answers to the two questions. The closer it approaches an absolute value of 1.00, the greater is this degree. Conversely, the closer it approaches to 0, the less is this degree.

⟨15⟩ Mean (1): Refers to Variable 1, Q13. It indicates the arithmetic mean of the sample of 5,359 for Q13, coded 1 through 6. The mean measures the location of the "center" of the one-way frequency distribution for Q13. The zero values are included in this computation even though listed in the "Values Not Entered" section of the table.

⟨16⟩ Mean (2): Refers to Variable 2, Q9. It indicates the arithmetic mean of the sample of 5,354 for Q9 codes 0 through 12. See ⟨15⟩ above.

⟨17⟩ SD (1): Refers to Variable 1, Q13. It indicates the standard deviation of the total of 5,359 for Q13, codes 1 through 6, respective numerical values. The standard deviation measures the "spread" of the one-way frequency distribution for Q13 about its mean. The zero values are included in this computation even though listed in the "Values Not Entered" section of the table.

⟨18⟩ SD (2): Refers to Variable 2, Q9. It indicates the standard deviation of the sample of 5,354 for Q9, codes 0 through 12. See ⟨17⟩ above.

Q13   IS CROSS TABULATED WITH   Q9   OR, ①

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1 ②

NUMBER OF REPLICATIONS= 5359 ③

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED) ④
        2   6   1
        1   12   1

(2) ⑤   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q13
⑥ 6 • ⑥6 227   142   126   101   81   71   55   44   26   30   9   ⑨998   ⑨
     T•   4   3   2   2   2   1   1   1   0   1   0   19
     R•   23   14   13   10   8   7   6   4   3   3   1   100
     C•   26   23   23   15   13   18   8   18   12   13   12   5

     5 •   22   69   42   36   55   34   35   13   17   11   25   9   388
     T•   0   1   1   1   1   1   1   1   0   0   0   0   7
     R•   6   18   11   9   14   9   9   9   4   3   6   2   100
     C•   10   8   7   6   8   6   9   5   7   5   11   12   7

     4 •   33   227   160   166   167   77   94   177   55   68   70   24 1418
     T•   1   4   3   3   3   3   2   3   1   1   1   0   26
     R•   2   16   11   12   12   12   7   12   4   5   5   2   100
     C•   15   26   26   30   25   29   23   27   23   32   30   33   26

     3 •   33   167   152   117   189   160   118   189   80   72   46   16 1339
     T•   1   3   3   2   2   4   3   2   4   1   1   0   25
     R•   2   12   11   9   14   12   9   14   6   5   3   1   100
     C•   15   19   25   21   28   26   29   28   33   34   19   22   25

     2 •   21   100   73   63   126   108   59   155   36   30   51   9   831
     T•   0   2   1   1   2   2   1   3   1   1   1   0   16
     R•   3   12   9   8   15   13   7   19   4   4   6   1   100
     C•   10   12   12   11   19   18   15   23   15   14   22   12   16

     1 •   24   70   40   47   29   49   27   58   11   5   14   6   380
     T•   0   1   1   1   1   1   1   1   0   0   0   0   7
     R•   6   18   11   12   8   13   7   15   3   1   4   2   100
     C•   11   8   7   8   4   8   7   9   5   2   6   8   7

(1) ⑦   1   3   5   7   9   11
Q9   ⑧   2   4   6   8   10   12

COLUMN ⑧219   609   667   404   243   236
TOTAL   860   555   609   667   212   73

PERCENT ④   11   12   8   5   4
TOTAL   16   10   11   12   4   1

GRAND TOTAL= 5354 ⑩

CHI-SQUARE (OF TABLE)   335.31030
DF= 55 ⑪

VALUES NOT ENTERED   5 ⑫
     CASE NO. ⑬ VARIABLE 2   VARIABLE 1
     2673   1   0
     2686   1   0
     2694   6   0
     3552   2   0
     3568   2   0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.1214   ⑰
MEAN(1)= ⑮ 5.39816   SD(1)= ⑰ 2.83317
MEAN(2)= ⑯ 3.67065   SD(2)= ⑱ 1.49103

(Question 13)
I.   (1) From recall
II.   (2) Less than 1 day
III.   (3) 1 - 7 days
IV.   (4) 8 - 30 days
V.   (5) 31 - 90 days
VI.   (7) More than 90 days

     (Question 9)
I.   (02) Research - basic
II.   (01) Research - applied
III.   (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (05) Development - operational system
VII.   (06) R&D support
VIII. (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII.   (12) Customer relations

Figure 3-1. Example of Two-Way Frequency Distribution Printout

3.2 INDEX

USER, TASK AND UTILIZATION, but not SEARCH AND ACQUISITION, Questions

The order of questions in a pair has been permuted in half the instances, to show all pairs that were run containing a question. Those tables with the reverse listing have table numbers which are out of sequence. The sample size for these tables is 1500.

Questions	Description	Table	Page
Q39 vs. Q54	Use of DDC vs. Type of Work Activity	3-66	3-93
Q39 vs. Q55	Use of DDC vs. Kind of Work Position	3-67	3-94
Q39 vs. Q56	Use of DDC vs. Field of Work Position	3-68	3-95
Q39 vs. Q58	Use of DDC vs. User's Equivalent GS Rating	3-69	3-96
Q39 vs. Q59	Use of DDC vs. Interviewer's Assessment of User's Information Needs	3-70	3-97
Q40 vs. Q37	Use of DOD Specialized Information Centers vs. Use of TAB	3-49	3-76
Q40 vs. Q39	Use of DOD Specialized Information Centers vs. Use of DDC	3-62	3-89
Q40 vs. Q41	Use of DOD Specialized Information Centers vs. Use of Other Specialized Information Centers	3-71	3-98
Q40 vs. Q50A	Use of DOD Specialized Information Centers vs User's Highest Degree	3-72	3-99
Q40 vs. Q54	Use of DOD Specialized Information Centers vs. Type of Work Activity	3-73	3-100
Q40 vs. Q55	Use of DOD Specialized Information Centers vs. Kind of Work Position	3-74	3-101
Q40 vs. Q56	Use of DOD Specialized Information Centers vs. Field of Work Position	3-75	3-102
Q40 vs. Q58	Use of DOD Specialized Information Centers vs. User's Equivalent GS Rating	3-76	3-103
Q41 vs. Q40	Use of Other Specialized Information Centers vs. Use of DOD Specialized Information Centers	3-71	3-98
Q41 vs. Q54	Use of Other Specialized Information Centers vs. Type of Work Activity	3-77	3-104
Q42 vs. Q54	Encounter of Restrictions vs. Type of Work Activity	3-78	3-105
Q43 vs. Q35	Nature of Restrictions vs. Use of Company TIC	3-41	3-68
Q43 vs. Q37	Nature of Restrictions vs. Use of TAB	3-50	3-77
Q43 vs. Q39	Nature of Restrictions vs. Use of DDC	3-63	3-90

Questions	Description	Table	Page
Q50A vs. Q53	User's Highest Degree vs. Interviewer's Assessment of User's Information Needs	3-91	3-118
Q50A vs. Q63	User's Highest Degree vs. Interviewer's Assessment of Task Creativity	3-92	3-119
Q50C vs. Q45	Field of User's Highest Degree vs. Encounter of Difficulties	3-82	3-109
Q50C vs. Q50A	Field of User's Highest Degree vs. User's Highest Degree	3-87	3-114
Q50C vs. Q55	Field of User's Highest Degree vs. Kind of Work Position	3-93	3-120
Q50C vs. Q56	Field of User's Highest Degree vs. Field of Work Position	3-94	3-122
Q54 vs. Q9	Type of Work Activity vs. Kind of Task Output	3-21	3-48
Q54 vs. Q10	Type of Work Activity vs. Field of Task Output	3-29	3-56
Q54 vs. Q32	Type of Work Activity vs. Discovery of Information Available, but Unknown, during Task	3-36	3-63
Q54 vs. Q39	Type of Work Activity vs. Use of DDC	3-66	3-93
Q54 vs. Q40	Type of Work Activity vs. Use of DOD Specialized Information Centers	3-73	3-100
Q54 vs. Q41	Type of Work Activity vs. Use of Other Specialized Information Centers	3-77	3-104
Q54 vs. Q42	Type of Work Activity vs. Encounter of Restrictions	3-78	3-105
Q54 vs. Q58	Type of Work Activity vs. User's Equivalent GS Rating	3-95	3-124
Q55 vs. Q7	Kind of Work Position vs. Task Recipient	3-14	3-41
Q55 vs. Q9	Kind of Work Position vs. Kind of Task Output	3-22	3-49
Q55 vs. Q10	Kind of Work Position vs. Field of Task Output	3-30	3-57
Q55 vs. Q32	Kind of Work Position vs. Discovery of Information Available, but Unknown, during Task	3-37	3-64
Q55 vs. Q35	Kind of Work Position vs. Use of Company TIC	3-44	3-71

Questions	Description	Table	Page
Q59 vs. Q35	Interviewer's Assessment of User's Information Needs vs. Use of Company TIC	3-46	3-73
Q59 vs. Q37	Interviewer's Assessment of User's Information Needs vs. Use of TAB	3-56	3-83
Q59 vs. Q39	Interviewer's Assessment of User's Information Needs vs. Use of DDC	3-70	3-97
Q59 vs. Q50A	Interviewer's Assessment of User's Information Needs vs. User's Highest Degree	3-91	3-118
Q59 vs. Q55	Interviewer's Assessment of User's Information Needs vs. Kind of Work Position	3-98	3-127
Q59 vs. Q56	Interviewer's Assessment of User's Information Needs vs. Field of Work Position	3-100	3-129
Q61 vs. Q9	Interviewer's Assessment of Difficulty in Use of Information vs. Kind of Task Output	3-25	3-52
Q61 vs. Q10	Interviewer's Assessment of Difficulty in Use of Information vs. Field of Task Output	3-33	3-60
Q61 vs. Q62	Interviewer's Assessment of Difficulty in Use of Information vs. Interviewer's Assessment of Difficulty in Acquisition of Information	3-101	3-130
Q62 vs. Q9	Interviewer's Assessment of Difficulty in Acquisition of Information vs. Kind of Task Output	3-26	3-53
Q62 vs. Q10	Interviewer's Assessment of Difficulty in Acquisition of Information vs. Field of Task Output	3-34	3-61
Q62 vs. Q61	Interviewer's Assessment of Difficulty in Acquisition of Information vs. Interviewer's Assessment of Difficulty in Use of Information	3-101	3-130
Q63 vs. Q5	Interviewer's Assessment of Task Creativity vs. Type of Task Output	3-12	3-39
Q63 vs. Q9	Interviewer's Assessment of Task Creativity vs. Kind of Task Output	3-27	3-54
Q63 vs. Q10	Interviewer's Assessment of Task Creativity vs. Field of Task Output	3-35	3-62
Q63 vs. Q50A	Interviewer's Assessment of Task Creativity vs. User's Highest Degree	3-92	3-119

USER, TASK AND UTILIZATION Questions vs SEARCH AND ACQUISITION Questions

The order of questions in a pair has been permuted to show all pairs that were run containing a question. Those tables with the reverse listing have table numbers which are out of sequence. The sample size for these tables is 5359.

Questions	Description	Table	Page
Q3 vs. Q14	Elapsed Time on Task vs. Location of First Source for Information	3-102	3-132
Q3 vs. Q25	Elapsed Time on Task vs. Desired Detail of ransporting Medium	3-103	3-134
Q3 vs. Q28	Elapsed Time on Task vs. Class of Information	3-104	3-135
Q5 vs. Q16	Type of Task Output vs. Desired Class of Information	3-105	3-137
Q5 vs. Q22	Type of Task Output vs. Desired Volume of Transporting Medium	3-106	3-138
Q5 vs. Q25	Type of Task Output vs. Desired Detail of Transporting Medium	3-107	3-139
Q5 vs. Q27	Type of Task Output vs. Desired Layout of Transporting Medium	3-108	3-140
Q5 vs. Q28	Type of Task Output vs. Class of Information	3-109	3-141
Q8 vs. Q16	Class of Task Output vs. Desired Class of Information	3-110	3-142
Q8 vs. Q25	Class of Task Output vs. Desired Detail of Transporting Medium	3-111	3-144
Q9 vs. Q13	Kind of Task Output vs. Desired Acquisition Time for Information	3-112	3-145
Q9 vs. Q14	Kind of Task Output vs. Location of First Source for Information	3-113	3-146
Q9 vs. Q22	Kind of Task Output vs. Desired Volume of Transporting Medium	3-114	3-148
Q9 vs. Q23	Kind of Task Output vs. Usefulness of Title Listings or Abstracts	3-115	3-149
Q9 vs. Q25	Kind of Task Output vs. Desired Detail of Transporting Medium	3-116	3-150
Q9 vs. Q27	Kind of Task Output vs. Desired Layout of Transporting Medium	3-117	3-151

Questions	Description	Table	Page
Q9 vs. Q28	Kind of Task Output vs. Class of Information	3-118	3-153
Q10 vs. Q14	Field of Task Output vs. Location of First Source for Information	3-119	3-155
Q10 vs. Q16	Field of Task Output vs. Desired Class of Information	3-120	3-157
Q10 vs. Q22	Field of Task Output vs. Desired Volume of Transporting Medium	3-121	3-158
Q10 vs. Q25	Field of Task Output vs. Desired Detail of Transporting Medium	3-122	3-159
Q10 vs. Q27	Field of Task Output vs. Desired Layout of Transporting Medium	3-123	3-160
Q10 vs. Q28	Field of Task Output vs. Class of Information	3-124	3-162
Q12 vs. Q13	Actual Acquisition Time for Information vs. Desired Acquisition Time for Information	3-125	3-164
Q12 vs. Q14	Actual Acquisition Time for Information vs. Location of First Source for Information	3-126	3-165
Q12 vs. Q18	Actual Acquisition Time for Information vs. Actual Composition of Transporting Medium	3-127	3-166
Q12 vs. Q21	Actual Acquisition Time for Information vs. Actual Volume of Transporting Medium	3-128	3-168
Q12 vs. Q24	Actual Acquisition Time for Information vs. Actual Detail of Transporting Medium	3-129	3-169
Q12 vs. Q28	Actual Acquisition Time for Information vs. Class of Information	3-130	3-170
Q12 vs. Q29	Actual Acquisition Time for Information vs. Field of Information	3-131	3-171
Q13 vs. Q14	Desired Acquisition Time for Information vs. Location of First Source for Information	3-132	3-172
Q13 vs. Q9	Desired Acquisition Time for Information vs. Kind of Task Output	3-112	3-145
Q13 vs. Q12	Desired Acquisition Time for Information vs. Actual Acquisition Time for Information	3-125	3-164
Q13 vs. Q16	Desired Acquisition Time for Information vs. Desired Class of Information	3-133	3-173

Questions	Description	Table	Page
Q15 vs. Q14	Why First Source Used vs. Location of First Source for Information	3-137	3-177
Q15 vs. Q17	Why First Source Used vs. Acquisition from First Source	3-146	3-190
Q16 vs. Q5	Desired Class of Information vs. Type of Task Output	3-105	3-137
Q16 vs. Q8	Desired Class of Information vs. Class of Task Output	3-110	3-142
Q16 vs. Q10	Desired Class of Information vs. Field of Task Output	3-120	3-157
Q16 vs. Q13	Desired Class of Information vs. Desired Acquisition Time for Information	3-133	3-173
Q16 vs. Q14	Desired Class of Information vs. Location of First Source for Information	3-138	3-178
Q16 vs. Q17	Desired Class of Information vs. Acquisition from First Source	3-147	3-191
Q16 vs. Q21	Desired Class of Information vs. Actual Volume of Transporting Medium	3-148	3-192
Q16 vs. Q22	Desired Class of Information vs. Desired Volume of Transporting Medium	3-149	3-193
Q16 vs. Q23	Desired Class of Information vs. Usefulness of Title Listings or Abstracts	3-150	3-194
Q16 vs. Q24	Desired Class of Information vs. Actual Detail of Transporting Medium	3-151	3-195
Q16 vs. Q25	Desired Class of Information vs. Desired Detail of Transporting Medium	3-152	3-196
Q16 vs. Q26	Desired Class of Information vs. Actual Layout of Transporting Medium	3-153	3-197
Q16 vs. Q27	Desired Class of Information vs. Desired Layout of Transporting Medium	3-154	3-199
Q16 vs. Q28	Desired Class of Information vs. Class of Information	3-155	3-201
Q16 vs. Q29	Desired Class of Information vs. Field of Information	3-156	3-203

Questions	Description	Table	Page
Q16 vs. Q32	Desired Class of Information vs. Discovery of Information Available, but Unknown, during Task	3-157	3-205
Q16 vs. Q61	Desired Class of Information vs. Interviewer's Assessment of Difficulty in Use of Information	3-158	3-206
Q16 vs. Q62	Desired Class of Information vs. Interviewer's Assessment of Difficulty in Acquisition of Information	3-159	3-207
Q17 vs. Q14	Acquisition from First Source vs. Location of First Source for Information	3-139	3-180
Q17 vs. Q15	Acquisition from First Source vs. Why First Source Used	3-146	3-190
Q17 vs. Q16	Acquisition from First Source vs. Desired Class of Information	3-147	3-191
Q17 vs. Q22	Acquisition from First Source vs. Desired Volume of Transporting Medium	3-160	3-208
Q17 vs. Q25	Acquisition from First Source vs. Desired Detail of Transporting Medium	3-161	3-209
Q18 vs. Q12	Actual Composition of Transporting Medium vs. Actual Acquisition Time for Information	3-127	3-166
Q18 vs. Q21	Actual Composition of Transporting Medium vs. Actual Volume of Transporting Medium	3-162	3-210
Q18 vs. Q24	Actual Composition of Transporting Medium vs. Actual Detail of Transporting Medium	3-163	3-211
Q19 vs. Q13	Usual Composition of Transporting Medium vs. Desired Acquisition Time for Information	3-134	3-174
Q21 vs. Q12	Actual Volume of Transporting Medium vs. Actual Acquisition Time for Information	3-128	3-168
Q21 vs. Q16	Actual Volume of Transporting Medium vs. Desired Class of Information	3-148	3-192
Q21 vs. Q18	Actual Volume of Transporting Medium vs. Actual Composition of Transporting Medium	3-162	3-210
Q21 vs. Q22	Actual Volume of Transporting Medium vs. Desired Volume of Transporting Medium	3-164	3-212

Questions	Description	Table	Page
Q21 vs. Q24	Actual Volume of Transporting Medium vs. Actual Detail of Transporting Medium	3-165	3-213
Q21 vs. Q26	Actual Volume of Transporting Medium vs. Actual Layout of Transporting Medium	3-166	3-214
Q21 vs. Q27	Actual Volume of Transporting Medium vs. Desired Layout of Transporting Medium	3-167	3-215
Q21 vs. Q28	Actual Volume of Transporting Medium vs. Class of Information	3-168	3-216
Q21 vs. Q29	Actual Volume of Transporting Medium vs. Field of Information	3-169	3-217
Q21 vs. Q30	Actual Volume of Transporting Medium vs. Essentiality of Information to Task	3-170	3-218
Q21 vs. Q31	Actual Volume of Transporting Medium vs. Extensiveness of Information Use in Task	3-171	3-219
Q22 vs. Q5	Desired Volume of Transporting Medium vs. Type of Task Output	3-106	3-138
Q22 vs. Q9	Desired Volume of Transporting Medium vs. Kind of Task Output	3-114	3-148
Q22 vs. Q10	Desired Volume of Transporting Medium vs. Field of Task Output	3-121	3-158
Q22 vs. Q13	Desired Volume of Transporting Medium vs. Desired Acquisition Time for Information	3-135	3-175
Q22 vs. Q14	Desired Volume of Transporting Medium vs. Location of First Source for Information	3-140	3-181
Q22 vs. Q16	Desired Volume of Transporting Medium vs. Desired Class of Information	3-149	3-193
Q22 vs. Q17	Desired Volume of Transporting Medium vs. Acquisition from First Source	3-160	3-208
Q22 vs. Q21	Desired Volume of Transporting Medium vs. Actual Volume of Transporting Medium	3-164	3-212
Q22 vs. Q23	Desired Volume of Transporting Medium vs. Usefulness of Title Listings or Abstracts	3-172	3-220
Q22 vs. Q25	Desired Volume of Transporting Medium vs. Desired Detail of Transporting Medium	3-173	3-221

Questions	Description	Table	Page
Q22 vs. Q27	Desired Volume of Transporting Medium vs. Desired Layout of Transporting Medium	3-174	3-222
Q22 vs. Q28	Desired Volume of Transporting Medium vs. Class of Information	3-175	3-223
Q22 vs. Q32	Desired Volume of Transporting Medium vs. Discovery of Information Available, but Unknown, during Task	3-176	3-224
Q22 vs. Q61	Desired Volume of Transporting Medium vs. Interviewer's Assessment of Difficulty in Use of Information	3-177	3-225
Q22 vs. Q62	Desired Volume of Transporting Medium vs. Interviewer's Assessment of Difficulty in Acquisition of Information	3-178	3-226
Q23 vs. Q9	Usefulness of Title Listings or Abstracts vs. Kind of Task Output	3-115	3-149
Q23 vs. Q16	Usefulness of Title Listings or Abstracts vs. Desired Class of Information	3-150	3-194
Q23 vs. Q22	Usefulness of Title Listings or Abstracts vs. Desired Volume of Transporting Medium	3-172	3-220
Q23 vs. Q25	Usefulness of Title Listings or Abstracts vs. Desired Detail of Transporting Medium	3-179	3-227
Q23 vs. Q55	Usefulness of Title Listings or Abstracts vs. Kind of Work Position	3-180	3-228
Q23 vs. Q56	Usefulness of Title Listings or Abstracts vs. Field of Work Position	3-181	3-229
Q24 vs. Q12	Actual Detail of Transporting Medium vs. Actual Acquisition Time for Information	3-129	3-169
Q24 vs. Q14	Actual Detail of Transporting Medium vs. Location of First Source for Information	3-141	3-182
Q24 vs. Q16	Actual Detail of Transporting Medium vs. Desired Class of Information	3-151	3-195
Q24 vs. Q18	Actual Detail of Transporting Medium vs. Actual Composition of Transporting Medium	3-163	3-211
Q24 vs. Q21	Actual Detail of Transporting Medium vs. Actual Volume of Transporting Medium	3-165	3-213

Questions	Description	Table	Page
Q25 vs. Q23	Desired Detail of Transporting Medium vs. Usefulness of Title Listings or Abstracts	3-179	3-227
Q25 vs. Q24	Desired Detail of Transporting Medium vs. Actual Detail of Transporting Medium	3-182	3-230
Q25 vs. Q27	Desired Detail of Transporting Medium vs. Desired Layout of Transporting Medium	3-189	3-237
Q25 vs. Q32	Desired Detail of Transporting Medium vs. Discovery of Information Available, but Unknown, during Task	3-190	3-238
Q25 vs. Q61	Desired Detail of Transporting Medium vs. Interviewer's Assessment of Difficulty in Use of Information	3-191	3-239
Q25 vs. Q62	Desired Detail of Transporting Medium vs. Interviewer's Assessment of Difficulty in Acquisition of Information	3-192	3-240
Q26 vs. Q16	Actual Layout of Transporting Medium vs. Desired Class of Information	3-153	3-197
Q26 vs. Q21	Actual Layout of Transporting Medium vs. Actual Volume of Transporting Medium	3-166	3-214
Q26 vs. Q24	Actual Layout of Transporting Medium vs. Actual Detail of Transporting Medium	3-183	3-231
Q26 vs. Q27	Actual Layout of Transporting Medium vs. Desired Layout of Transporting Medium	3-193	3-241
Q26 vs. Q28	Actual Layout of Transporting Medium vs. Class of Information	3-194	3-243
Q26 vs. Q29	Actual Layout of Transporting Medium vs. Field of Information	3-195	3-245
Q27 vs. Q5	Desired Layout of Transporting Medium vs. Type of Task Output	3-108	3-140
Q27 vs. Q9	Desired Layout of Transporting Medium vs. Kind of Task Output	3-117	3-151
Q27 vs. Q10	Desired Layout of Transporting Medium vs. Field of Task Output	3-123	3-160
Q27 vs. Q16	Desired Layout of Transporting Medium vs. Desired Class of Information	3-154	3-199

Questions	Description	Table	Page
Q27 vs. Q21	Desired Layout of Transporting Medium vs. Actual Volume of Transporting Medium	3-167	3-215
Q27 vs. Q22	Desired Layout of Transporting Medium vs. Desired Volume of Transporting Medium	3-174	3-222
Q27 vs. Q24	Desired Layout of Transporting Medium vs. Actual Detail of Transporting Medium	3-184	3-232
Q27 vs. Q25	Desired Layout of Transporting Medium vs. Desired Detail of Transporting Medium	3-189	3-237
Q27 vs. Q26	Desired Layout of Transporting Medium vs. Actual Layout of Transporting Medium	3-193	3-241
Q28 vs. Q3	Class of Information vs. Elapsed Time on Task	3-104	3-135
Q28 vs. Q5	Class of Information vs. Type of Task Output	3-109	3-141
Q28 vs. Q9	Class of Information vs. Kind of Task Output	3-118	3-153
Q28 vs. Q10	Class of Information vs. Field of Task Output	3-124	3-162
Q28 vs. Q12	Class of Information vs. Actual Acquisition Time for Information	3-130	3-170
Q28 vs. Q14	Class of Information vs. Location of First Source for Information	3-143	3-184
Q28 vs. Q16	Class of Information vs. Desired Class of Information	3-155	3-201
Q28 vs. Q21	Class of Information vs. Actual Volume of Transporting Medium	3-168	3-216
Q28 vs. Q22	Class of Information vs. Desired Volume of Transporting Medium	3-175	3-223
Q28 vs. Q24	Class of Information vs. Actual Detail of Transporting Medium	3-185	3-233
Q28 vs. Q26	Class of Information vs. Actual Layout of Transporting Medium	3-194	3-243
Q28 vs. Q30	Class of Information vs. Essentiality of Information to Task	3-196	3-247
Q28 vs. Q31	Class of Information vs. Extensiveness of Information Use in Task	3-197	3-248

3.3 DISTRIBUTIONS

USER, TASK and UTILIZATION,
but Not SEARCH AND ACQUISITION Questions

Table 3-1. Task Initiator vs. Task Recipient

```
    Q2      IS CROSS TABULATED WITH      Q7    OR,

VARIABLE  1 IS CROSS TABULATED WITH VARIABLE  4

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    1       6       1
    4       6       1
```

```
(1,1)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q2
  6 *    3 56162   4   4   229
  T*     0  4  11  0   0    15
  R*     1 24  71  2   2   100
  C*    14  7  31  9  18    15
  5 *   11 93  85      4   283
  T*     0 13   6      0    19
  R*     0 64  30      1   100
  C*     5 22  16     18    19
  4 *   33 79 143   3   7   535
  T*     0 26  10   0   0    36
  R*     1 71  27   1   1   100
  C*    14 43  24   7  32    36
  3 *      86 38   2   2   128
  T*       6  3   0   0     9
  R*      67 30   2   2   100
  C*      10  7   4   9     9
  2 *    4 75  30   7   3   119
  T*     0  5   2   0   0     8
  R*     3 63  25   6   3   100
  C*    18  8   5  16  14     8
  1 *   111 71 60 25   2   203
  T*     1  7   4   2   0    14


  R*     5 56  30  14   1   100
  C*    50 11  12  64   9    14

       *****************************
  (4)    1      2      5     6
  Q7            2      4

COLUMN  22      518    22
TOTAL        856     45

PERCENT  1      35     1
TOTAL        56      3

GRAND TOTAL= 1497

CHI-SQUARE (OF TABLE)      334.05245
DF=  20.

VALUES NOT ENTERED    3
  CASE NO.      VARIABLE  1     VARIABLE  4
    828             2              0
    916             6              0
   1446             1              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED,
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0534
  MEAN(  4)=     2.43747    SD (  4)=    0.45941
  MEAN(  1)=     3.84047    SD (  1)=    1.55077
```

(Question 2)
I.	(6)	Initiative of respondent
II.	(5)	Decision by respondent and colleagues
III.	(6)	Application of standard procedures
IV.	(3)	Direction by immediate supervisor
V.	(2)	Direction by higher management
VI.	(1)	Instruction or questions directed from the customer

(Question 7)
I.	(1)	Individual's own use
II.	(2)	Individual(s) within the respondent's company
III.	(5)	A particular contractor or contractors
III.	(6)	Department of Defense
III.	(7)	NASA
IV.	(3)	Members of the respondent's profession
V.	(4)	A major segment of an industry

Table 3-2. Percentage of Time on Task vs. Elapsed Time on Task

```
     Q4      IS CROSS TABULATED WITH      Q3       OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        5        1
    1        9        1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q4
    5 *  67 23 20 40 81 52 19 14 12   328        (Question 4)
    T*   4  2  1  3  5  3  1  1  1    22        I.    (1)   Under 25%
    R*  20  7  6 12 25 16  6  4  4   100        II    (2)   25 - 49%
    C*  37 21 15 24 20 21 23 15 18    22        III.  (3)   50 - 74%
    *                                            IV.   (4)   75 - 99%
    4 *  25 14 23 24 71 46 13 25 10   251        V     (5)   Full time
    T*   2  1  2  2  5  3  1  2  1    17
    R*  10  6  9 10 28 18  5 10  4   100
    C*  14 13 17 15 17 18 16 26 15    17        (Question 3)
    *                                            I.    (1)   1 - 7 days
    3 *  38 29 34 41 74 50 17 20 15   318        II.   (2)   8 - 14 days
    T*   3  2  2  3  5  3  1  1  1    21        III   (3)   15 - 21 days
    R*  12  9 11 13 23 16  5  6  5   100        IV    (4)   22 - 30 days
    C*  21 26 25 25 18 20 20 21 22    21        V     (5)   31 - 90 days
    *                                            VI    (6)   91 - 180 days
    2 *  35 23 33 23 77 48 13 12  9   273        VII.  (7)   181 - 270 days
    T*   2  2  2  2  5  3  1  1  1    18        VIII. (8)   271 - 365 days
    R*  13  8 12  8 28 18  5  4  3   100        IX    (9)   More than 365 days
    C*  19 21 25 14 19 17 16 13 13    18
    *
    1 *  18  2 24 36107 57 71 24 22   330
    T*   1  1  2  2  7  4  1  2  1    22
    R*   5  6  7 11 32 17  6  7  7   100
    C*  10 19 18 22 26 23 25 25 32    22
    *
         ************************************
( 1)     1    3    5    7    9
```

```
Q3         2    4    6    8

COLUMN 183   134   410   83   68
 TOTAL    110   164   253   95

PERCENT  12    9    27    6    5
 TOTAL      7    11    17    6

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)       68.93903
DF=  32

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0930
MEAN(  1)=     4.65467   SD( 1)=     2.15589
MEAN(  2)=     2.98267   SD( 2)=     1.45090
```

Table 3-3. Task Recipient vs. Elapsed Time on Task

```
    Q7      IS CROSS TABULATED WITH      Q3      OR,

VARIABLE  4 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    4       5       1
    2       5       1


( 4)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q7
    5 *   4  1  1  2  7  5       1  1   22
    7*    0  0  0  0  0  0       0  0    1
    8*   18  5  5  9 32 23       5  5  100
    C*    2  1  1  1  2  2       1  1    1
      *
    4 *      1  2  6 11 11  2  6  6   45
    7*       0  0  0  1  1  0  0  0    3
    8*       2  4 13 24 24  4 13 13  100
    C*       1  2  4  3  4  2  6  9    3
      *
    3 *   26 29 50 58 51 97 27 45 25  518
    7*     2  2  3  4 10  6  2  3  2   35
    8*     7  6 10 11 29 19  5  9  5  100
    C*    20 26 38 36 37 38 33 48 37   35
      *
    2 *  141 77 78 96235138 51 40 34  890
    7*     6  5  5  6 16  9  3  3  2   59
    8*    16  5  9 11 26 16  6  4  4  100
    C*    77 70 59 59 57 55 61 43 50   59
      *
    1 *    2  2  2  1  6  2  3  2  2   22
    7*     0  0  0  0  0  0  0  0  0    1
    8*     9  9  9  5 27  9 14  9  9  100
    C*     1  2  2  1  1  1  4  2  3    1
      *
    *****************************************
( 2)    1     3     5     7     9
```

(Question 7)
I.   (1)   Individual's own use
II.   (2)   Individual(s) within the respondent's company
III. (5)   A particular contractor or contractors
III. (6)   Department of Defense
III. (7)   NASA
IV. (3)   Members of the respondent's profession
V.   (4)   A major segment of an industry

(Question 3)
I.   (1)   1 - 7 days
II.   (2)   8 - 14 days
III. (3)   15 - 21 days
IV. (4)   22 - 30 days
V.   (5)   31 - 90 days
VI. (6)   91 - 180 days
VII. (7)   181 - 270 days
VIII. (8)   271 - 365 days
IX. (9)   More than 365 days

```
Q3           2      4      6      8

COLUMN 183   133   413     83    68
  TOTAL  110   163   253    64

PERCENT  12     9    27      6     5
  TOTAL   7    11    17      4

GRAND TOTAL= 1497

CHI-SQUARE FOR TABLE         45.40441
DF=  32

VALUES NOT ENTERED     3
   CASE NO.      VARIABLE   4      VARIABLE   2
      829                0                8
      914                0                3
     1444                0                4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1277
  MEAN( 2)=     4.86467   SD( 2)=   2.15549
  MEAN( 4)=     2.41467   SD( 4)=   0.65941
```

Table 3-4. Class of Task Output vs. Elapsed Time on Task

```
    Q8      IS CROSS TABULATED WITH     Q3      OR,

VARIABLE   5 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     5      14       1
     2       9       1


( 5)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q8
   14 *  10  7  7  6 10   -  3  4        56
    T*    1  0  0  0  1  1  0  0          4
    R*   18 12 13 11 18 16  5  7        100
    C*    5  6  5  4  2  4  4  4          4
     *
   13 *  10  3  3  6 10  5  5  7  4      53
    T*    1  0  0  0  1  0  0  0  0       4
    R*   19  6  6 11  9  9  9 13  8     100
    C*    6  3  2  4  2  2  6  7  6       4
     *
   12 *  12  6  1  6 14  9  2  2  5      57
    T*    1  0  0  0  1  1  0  0  0       4
    R*   21 11  2 11 25 16  4  4  9     100
    C*    7  5  1  4  3  4  2  2  7       4
     *
   11 *   8 11 11  8 24 17  1  5  4      89
    T*    1  1  1  1  2  1  0  0  0       6
    R*    9 12 12  9 27 19  1  6  4     100
    C*    4 10  8  5  6  7  1  5  6       6
     *
   10 *  32 17 17 37 64 43 11 16  4     241
    T*    2  1  1  2  4  3  1  1  0      16
    R*   13  7  7 15 27 18  5  7  2     100
    C*   17 15 13 23 16 17 13 17  6      16
     *
    9 *  11 11 13  9 30  9  7  2  1      93
    T*    1  1  1  1  2  1  0  0  0       6
    R*   12 12 14 10 32 10  8  2  1     100
    C*    6 10 10  5  7  4  8  2  1       6
     *
    8 *  24  6 21 11 33 21  7 10  8     141
    T*    2  0  1  1  2  1  0  1  1       9
    R*   17  4 15  8 23 15  5  7  6     100
    .*   13  5 16  7  8  8  8 11 12       9
     *
    7 *  14  7  0  9 24 11  3  5  4      86
    T*    1  0  1  1  2  1  0  0  0       6
    R*   16  8 10 10 28 13  3  6  5     100
    C*    8  6  7  5  6  4  4  5  6       6
     *
    6 *   9  5  8  6 16 11  5  4  7      75
    T*    1  0  1  0  1  1  1  0  0       5
    R*   12  7 11  8 21 15 12  5  9     100
    C*    5  5  6  4  4  4 11  4 10       5
     *
    5 *  27 24 32 40110 64 25 24 16     382
    T*    2  2  2  3  7  4  2  2  1      24
    R*    7  7  9 11 30 18  7  7  4     100
    C*   15 22 24 24 27 25 30 25 24      24
     *
    4 *   8  3  4 13 33 19  4  3  7      94
    T*    1  0  0  1  2  1  0  0  0       6
    R*    9  3  4 14 35 20  4  3  7     100
    C*    4  3  3  8  8  8  5  3 10       6
     *
    3 *  10  3     1  6  2  1  1         24
    T*    1  0     0  0  0  0  0          2
    P*   42 13     4 25  8  4  4        100
    C*    5  3     1  1  1  1  1          2
     *
    2 *   8  7  8 12 36 33  5 12  8     129
    T*    1  0  1  1  2  2  0  1  1       9
    R*    6  5  6  9 28 26  4  9  6     100
    C*    4  6  6  7  9 13  6 13 12       9
     *
    *****************************************
 ( 2)   1     3     5     7     9
 Q3         2     4     6     8

COLUMN 183   134   410    83    68

TOTAL    110   164   253    95

PERCENT  12     9    27     6     5
TOTAL         7    11    17     6

GRAND TOTAL= 1500
```

(Question 8)
II.	(1)	Concepts
III	(8)	Raw data
IV.	(5)	Math aids and formulae computer programs
V.	(3)	Designs or design techn ques
VI	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII	(13)	Evaluation
IX.	(9)	Specifications
X	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 3)
I.	(1)	1 - 7 days
II.	(2)	8 - 14 days
III.	(3)	15 - 21 days
IV.	(4)	22 - 30 days
V.	(5)	31 - 90 days
VI.	(6)	91 - 180 days
VII.	(7)	181 - 270 days
VIII	(8)	271 - 365 days
IX.	(0)	More than 365 days

```
CHI-SQUARE (OF TABLE)          154.85442
DF=  96

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.1034
MEAN( 2)=        4.65467   SD( 2)=        2.15589
MEAN( 5)=        7.38600   SD( 5)=        3.26069
```

Table 3-5. Kind of Task Output vs. Elapsed Time on Task

```
    Q9     IS CROSS TABULATED WITH     Q3   OR,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE 2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   6       12       1
   2        9       1
```

```
( 6 )              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q9
  12 •    3   1   6   1   6   1   1   1        23
    T•    0   0   0   0   0   0   0   0         1
    R•   15   5  30   5  30   5   5   5       105
    C•    2   1   4   1   1   0   1   1         1
     •
  11 •   14   9   6  12  14   7   3   1   3    69
    T•    1   1   0   1   1   0   0   0   0     5
    R•   20  13   9  17  20  10   4   1   4   100
    C•    8   6   4   7   3   3   4   1   4     5
     •
  10 •    7   6   6   7  20   4   2   5   1    58
    T•    0   0   0   0   1   0   0   0   0     4
    R•   12  10  10  12  34   7   3   9   2   100
    C•    4   5   4   4   5   2   2   5   1     4
     •
   9 •   11   8  11   5  14  12   3   3   3    69
    T•    1   1   1   0   1   1   0   0   0     5
    R•   14  12  16   7  20  17   4   4   4   100
    C•    5   7   8   3   3   5   4   3   4     5
     •
   8 •   39  16  20  23  56  22   6   7   1   190
    T•    3   1   1   2   4   1   0   0   0    13
    R•   21   8  11  12  29  12   3   4   1   100
    C•   21  16  15  14  14   9   7   7   1    13
     •
   7 •   22   9   9  13  30  13   8  11   5   118
    T•    1   1   1   1   2   1   0   1   0     8
```

(Question 9)
I.   (02) Research - basic
II.   (01) Research - applied
III.   (11) System analysis
IV.   (03) Development - advanced
V   (04) Development - engineering
VI.   (05) Development - operational system
VII.   (06) R&D support
VIII. (07) Test or evaluation
IX   (08) Production processes
X   (09) Production end-items
XI.   (10) Reliability or quality control
XII.   (12) Customer relations

(Question 5)
I.   (1)   1 - 7 days
II.   (2)   8 - 14 days
III.   (3)   15 - 21 days
IV.   (4)   22 - 30 days
V   (5)   31 - 90 days
VI.   (6)   91 - 180 days
VII.   (7)   181 - 270 days
VIII   (8)   271 - 365 days
IX   (9)   More than 365 days

```
   R•   19   8   8  11  25  11   5   9   4   100
   C•   12   9   7   8   7   5   7  12   7     8
    •
 A •   16  12  13  18  49  34   8   6   6   163
   T•    1   1   1   1   3   2   1   0   0    11
   R•   10   8   8  11  30  21   5   4   4   100
   C•    9  12  10  11  12  13  10   6   9    11
    •
 5 •   18  12  21  19  59  28   9  14   8   188
   T•    1   1   1   1   4   2   1   1   1    13
   R•   10   6  11  10  31  15   5   7   4   100
   C•   10  11  16  12  14  11  11  15  12    13
    •
 4 •   12   7  14  17  45  27   8  10   7   147
   T•    1   0   1   1   3   2   1   1   0    10
   R•    8   5   9  12  31  18   5   7   5   100
   C•    7   6  10  10  11  11  10  11  13    10
    •
 3 •   24  12  11  18  34  44  13   8   7   171
   T•    2   1   1   1   3   3   1   1   0    12
   R•   14   6   6  10  22  26   8   5   4   100
   C•   13   9   8  10   9  17  16   9  10    12
    •
 2 •   16  16  15  25  67  46  16  22  18   239
   T•    1   1   1   2   4   3   1   1   1    16
   R•    6   7   6  10  28  19   7   9   8   100
   C•    8  14  11  15  16  18  19  23  26    16
    •
 1 •    3   6   3   6  10  15   8   6   0    56
   T•    0   0   0   0   1   1   1   0   1     4
   R•    5   8   5   9  16  25  13   9  14   100
   C•    2   4   2   4   2   6  10   6  13     4
    •
   ••••••••••••••••••••••••••••••••••••••••••
 ( 2)    1   2   3   4   5   6   7   8   9
  2
COLUMN TOT  183  134  169   93  94
    TOTAL    113  164  253   94
PERCENT     12    9    11   6   5
    TOTAL     7   11    17   6
```

GRAND TOTAL= 1498

CHI-SQUARE (OF TABLE)   154.54643
DF=   88

VALUES NOT ENTERED = 2
  CASE NO.   VARIABLE 6   VARIABLE 2
    734   0   8
    979   0   5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =-0.2073
MEAN(2)= 4.65467   SD(2)= 2.15589
MEAN(6)= 5.40367   SD(6)= 2.85010

Table 3-6. Field of Task Output vs. Elapsed Time on Task

```
    Q7      IS CROSS TABULATED WITH      I16     OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  4

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     5       5       1
     4       5       1


( 5)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q7
    5 •    1  2  2  1 16   22
    T•     0  0  0  0  1    1
    R•     5  9  9  5 73  100
    C•     7  2  1  2  2    1
    •
    4 •          2    43   45
    T•           0    3    3
    R•           4    96  100
    C•           1    4    3
    •
    3 •    1  9 13 31444  518
    T•     0  1  2  2 30   39
    R•     0  2  6  6 86  100
    C•     7  9 10 30 43   35
    •
    2 •   13 33233 30473  330
    T•     1  6 10  2 32   39
    R•     1  9 33  3 54  100
    C•    87 83 87 40 40   39
    •
    1 •       4  7     9   33
    T•        0  0     3    1
    R•       27 32    41  100
    C•        4  3     1    1
    •
        ••••••••••••••••••••••••rrec
      ( 4)    1    3    9


BA          2    4

COLUMN  19   523   990
 TOTAL     163   63

PERCENT   1    22    6
 TOTAL     1    4

GRAND TOTAL= 1496

CHI-SQUARE (OF TABLE)      436.30327
DF=  16

VALUES NOT ENTERED   4
   CASE NO.     VARIABLE  5     VARIABLE  4
     190             3             0
     611             0             3
     916             0             3
    1446             0             4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT: 0.2996
MEAN( 4)=       4.27600    SD( 4)=     1.09287
MEAN( 5)=       2.43067    SD( 5)=     0.65941
```

(Question 7
I.   (1)   Individual's own use
II.   (2)   Individual(s) within the respondent's company
III.   (3)   A particular contractor or contractors
III.   (6)   Department of Defense
III.   (7)   NASA
IV.   (3)   Members of the respondent's profession
V.   (4)   A major segment of an industry

(Question 8)
I.   (3)   Hardware
II.   (4)   Informal briefing or discussion
III.   (3)   Informal document or memorandum
IV.   (2)   Formal briefing or demonstration
V.   (1)   Formal document

Table 3-7. Field of Work Position vs. Elapsed Time on Task

```
   056    IS CROSS TABULATED WITH    63    08.

VARIABLE  10  IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS=  1930

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    10       9       1
     2       9       1


(10)              (EXTREME RIGHT VALUE IS ROW TOTAL)
056
   9 *    3   2   2   1   5   8   3   1   2     27
   T*     C   C   A   0   0   1   0   C   0      2
   P*    11   7   7   4  19  3C  11   4   7    100
   C*     2   2   2   1   1   3   4   1   3      2
     *
   8 *   16   6  11  15  37  22   6   6   2    114
   T*     1   0   1   1   2   1   C   C   0      8
   P*    12   5  10  13  32  19   5   1   2    100
   C*     8   5   8   9   9   9   7   3   3      8
     *
   7 *   19  13  13  26  44  34   7  20  11    197
   T*     1   1   1   2   3   2   0   1   1     13
   P*    10   7   7  14  24   8   4  11   6    100
   T*    10  12  10  16  11  14   8  21  16     13
     *
   6 *   18   7  13  12  40  23  12  19  15    159
   T*     1   0   1   1   3   2   1   1   1     11
   P*    11   4   8   8  25  14   8  12   9    100
   C*    10   6  10   7  10   9  14  20  22     11
     *
   5 *   45  37  33  39 124  60  25  20  17    400
   T*     3   2   2   3   8   4   2   1   1     27
   P*    11   9   8  10  31  15   6   5   4    100
   C*    25  34  25  24  30  24  30  21  25     27
     *
   4 *   44  27  31  43 102  50  18  14   9    336
   T*     3   2   2   3   7   3   1   1   1     22

   P*    13   7   9  13  30  15   5   4   3    100
   C*    24  23  23  26  25  20  22  15  13     22
     *
   3 *   10   5   6   7  18  20   6   8   6     84
   T*     1   0   0   0   1   1   0   1   0      6
   P*    12   6   5   8  21  24   7  10   7    100
   C*     5   5   3   4   4   8   7   8   9      6
     *
   2 *    4   2   3   3   6   5   2   3   2     30
   T*     C   0   0   0   0   0   0   0   0      2
   P*    13   7  10  10  20  17   7  10   7    100
   C*     2   2   2   2   1   2   2   3   3      2
     *
   1 *   26  13  23  17  53  29   6   5   6    180
   T*     2   1   2   1   2   2   C   1   0     13
   P*    16   8  14  11  21  18   3   6   3    100
   C*    14  12  17  11   8  12   6   9   6     11
     *
   *************************************
  ( 2)   9   1   5   7   9
  03          2   4   6   8

COLUMN  193  133  409   83   68
TOTAL        110  166  251   96

PERCENT  12    9   27    6    5
TOTAL         7   11   17    6

GRAND TOTAL=  1636

CHI-SQUARE (OF TABLE)          51.69051
DF    64

VALUES NOT ENTERED   4
   CASE NO.    VARIABLE 10    VARIABLE  2
      120          0              6
      122          0              5
      197          C              3
      518          0              6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES)
```

(Question 56)

I   Production, Management and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II   Medical Sciences
- (16) Medical sciences

III   Mechanical Industrial, Civil and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV.   Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided missiles
- (19) Navigation

V   Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI   Chemical Science and Materials
- **(03)** Chemical warfare equipment and materials
- **(04)** Chemistry
- **(10)** Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII   Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII   Research and Research Equipment
- (30) Research and research equipment

IX   Mathematics
- (15) Mathematics

(Question 3)

I	(1)	1 - 7 days
II	(2)	8 - 14 days
III	(3)	15 - 21 days
IV	(4)	22 - 30 days
V	(5)	31 - 90 days
VI	(6)	91 - 180 days
VII	(7)	181 - 270 days
VIII	(8)	271 - 365 days
IX	(9)	More than 365 days

```
CORRELATION COEFFICIENT  0.0648
MEAN( 2)=  4.65467   SD( 2)=   2.15589
MEAN( 10)=  4.82200   SD( 10)=  1.98451
```

Table 3-8. Formality of Task Output vs. Type of Task Output

C6   IS CROSS TABULATED WITH   Q5   C4.

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 1501

VARIABLE PARTITION WINDOW (AS SPECIFIED)

2	5	1
1	7	1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q6

5 •	40	170	229	129	240	32	51	591
T•	7	11	15	9	16	2	10	8•
••	4	17	23	13	24	3	15	100
C•	44	63	78	64	65	58	62	64
4 •	17	7	12	4	12	2	10	63
T•	1	4	1	0	1	0	1	4
••	27	11	15	9	19	3	16	100
C•	19	2	1	3	3	4	4	4
3 •	5	90	48	49	92	9	51	329
T•	1	9	9	3	5	1	3	22
••	3	26	14	15	26	3	16	100
C•	10	90	16	29	22	16	23	22
2 •	9	14	7	17	33	12	11	94
T•	1	1	0	1	2	1	1	7
••	9	14	7	13	34	12	11	100
C•	9	5	2	7	9	22	5	7
1 •	14		1					15
T•	1		0					1
••	93		7					100
C•	16		1					1

************************,***********
(1)   1   4   5   7

Q5   2   4   6

COLUMN	89	264	57	223
TOTAL	271	193	55	

PERCENT	6	57	25	15
TOTAL	18	13	4	

GRAND TOTAL= 1466

CHI-SQUARE (OF TABLE)   326.13370
DF= 24

VALUES NOT ENTERED 5
CASE NO.	VARIABLE 2	VARIABLE 1
385	2	0
355	0	0
365	4	1
477	3	0
471	2	6

(THE FOLLOWING COMPUTATIONS ARE MADE ON ALL DATA ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES.)

CORRELATION COEFFICIENT .51747A
MEAN(1)=   4.51747   S.D.(1)=   1.74755
MEAN(2)=   4.57470   S.D.(2)=   1.48472

(Question 4)
I.	(5)	Hardware
II	(4)	Informal briefing or discussion
III	(3)	Informal document or memorandum
IV	(2)	Formal briefing or demonstration
V	(1)	Formal document

(Question 5)
I.	(7)	Hardware
II	(1)	Technical data or information
III	(6)	A design (includes specifications)
IV	(2)	A finding
V.	(3)	A recommendation
VI	(4)	A decision
VII.	(5)	A plan

Table 3-9. Task Recipient vs. Type of Task Output

```
   07     IS CROSS TABULATED WITH    05      OR.

  VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  1

  NUMBER OF REPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       3     5      1
       1     7      1


  ( 3)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
   07

    5 •    3   4   4   3   3     4    22
    T•     0   0   0   0   0     0     1
    P•    14  23  18  14  14    18   100
    C•     3   2   1   2   2     2     1
     •
    4 •    8   1  22   6   7     6    45
    T•     1   0   1   0   0     0     3
    P•    18   2  49  13   4    13   100
    C•     3   0  11   2   4     3     3
     •
    3 •   37  57  57  54 143   8  81   517
    T•     2   7   7   4  10   1   5    35
    P•     7  10  10  10  28   2  16   100
    C•    42  36  33  27  39  15  36    35
     •
    2 •   45 151 89 112214  44128   887
    T•     3  10  13   8  14   3   9    59
    P•     5  17  21  13  24   5  14   100
    C•    51  57  65  57  58  80  58    59
     •
    1 •    3   6   1   6   1   1   3    21
    T•     0   0   0   0   0   0   0     1
    P•    14  25   5  29   5   5  1'   100
    C•     3   2   0   3   0   2   1     1
     •
     **********************************
   ( 1)    1     3     5     7

```

<div style="float:right">

(Question 7)
I.   (1)   Individual's own use
II.   (2)   Individual(s) within the respondent's company
III.   (5)   A particular contractor or contractors
III.   (6)   Department of Defense
III.   (7)   NASA
IV.   (3)   Members of the respondent's profession
V.   (4)   A major segment of an industry

(Question 5)
I.   (7)   Hardware
II.   (1)   Technical data or information
III.   (6)   A design (includes specifications)
IV.   (2)   A finding
V.   (3)   A recommendation
VI.   (4)   A decision
VII.   (5)   A plan

</div>

```
  05          2     4     6

  COLUMN   80  292  367  222
   TOTAL      271  167  58

  PERCENT    8   23   25   15
   TOTAL       18   13    4

  GRAND TOTALS  1452

  CHI-SQUARE (OF TABLE)      53.49474
   DF=   24

  VALUES NOT ENTERED    8
    CASE NO.      VARIABLE  3    VARIABLE  1
      388             1              0
      390             2              0
      396             3              0
      400             2              0
      401             2              0
      128             3              3
      916             3              3
     1446            0              7

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
   EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.

  CORRELATION COEFFICIENT =0. 029
  MEAN( 1)=            ST DEV( 1)=            1.79759
  MEAN( 3)=    3.43567    ST( 3)=            .65041
```

Table 3-10. Class of Task Output vs. Type of Task Output

```
Q8      IS CROSS TABULATED WITH    Q5    OR,

VARIABLE  4 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUN MINIMUM  (AS SPECIFIED)
   4      14       1
   3       8       1
```

```
( 4)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q8
 14 *    5  2  9 13 10 17   56
 T*      0  0  1  1  1  1    4
 R*      9  4 16 23 18 70  100
 C*      2  1  5  4 18  8    4
 *
 1? *    5  8  1  3 18  4 16   53
 Y*      0  1  0  0  1  0  1    4
 R*      9 15  2  6 34  8 26  100
 C*      6  3  0  2  5  7  6    4
 *
 12 *   16  1 18 17  1  4   57
 T*      1  0  1  1  0  0    4
 R*     28  2 32 30  2  7  100
 C*      6  0  9  5  2  2    4
 *
 11 *    8  3 12  6 36  6 18   89
 T*      1  0  1  0  2  0  1    6
 R*      9  3 13  7 40  7 20  100
 C*      9  1  4  3 10 11  8    6
 *
 1? *   12 66 12 60 68  5 17  240
 T*      1  4  1  4  5  0  1   16
 R*      5 27  5 25 28  2  7  100
 C*     14 24  4 30 19  9  8   16
 *
  9 *    1  9 44  3 18  3 17   93
 T*      0  1  3  0  1  0  1    6
 R*      1 10 47  3 19  3 16  100
 C*      1  3 15  2  5  5  7    6
 *
  8 *    6 29  4 28 53     17  141
 T*      0  2  0  2  4  0  1    9
 P*      4 21  3 20 38  3 12  100
 C*      7 11  1 14 14  7  8    9
 *
  7 *   10 13 12  7 16  4 24   86
 T*      1  1  1  0  1  0  2    6
 R*     12 15 14  8 19  5 28  100
 C*     11  5  4  4  4  7 11    6
 *
  6 *    5 14  8 11 19  3 11   71
 T*      0  1  1  1  1  0  1    5
 R*      7 20 11 15 27  4 15  100
 C*      6  5  3  6  5  5  5    5
 *
  5 *   37 25176 17 66  5 34  362
 T*      2  2 12  1  4  0  2   24
 R*     10  7 49  5 18  1  9  100
 C*     42  9 61  9 18  9 15   24
 *
  4 *   38  9 12  8  4 23   94
 T*      3  1  1  1  0  2    6
 R*     40 10 13  9  4 24  100
 C*     14  3  6  2  7 10    6
 *
  3 *   17  1  3  1  1  1   24
 T*      1  0  0  0  0  0    2
 R*     71  4 13  4  4  4  100
 C*      6  0  2  0  2  0    2
 *
  2 *    4 28 10 20 34  5 28  129
 T*      0  2  1  1  2  0  2    9
 R*      3 22  8 16 26  4 22  100
 C*      5 10  3 10  9  9 13    9
 *
      **********************************
( 3)    1     3     5     7
Q5         2     4     6

COLUMN  88   294   367   223
 TOTAL    271   197    55

PERCENT  6    20    25    15
 TOTAL     18    13     4
```

(Question 8)

II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 5)

I.	(7)	Hardware
II.	(1)	Technical data or information
III.	(6)	A design (includes specifications)
IV.	(2)	A finding
V.	(3)	A recommendation
VI.	(4)	A decision
VII.	(5)	A plan

```
GRAND TOTAL? 1495

CHI-SQUARE (OF TABLE)       676.80342
DF=   72

VALUES NOT ENTERED    5
           VARIABLE  4     VARIABLE  3
   ?2             10             0
 390              6             0
 399              6             0
 400              6             0
 401              6             0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1152
MEAN( 3)=      4.01733   SD( 3)=      1.79755
MEAN( 4)=      7.38600   SD( 4)=      3.26069
```

Table 3-11. Field of Task Output vs. Type of Task Output

```
     Q1C    IS CROSS TABULATED WITH      Q5     Q8,

  VARIABLE  4 IS CROSS TABULATED WITH VARIABLE  1

  NUMBER OF REPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      4        9        1
      1        7
```

```
  ( 4)              (EXTREME RIGHT VALUE IS ROW TOTAL)
  F10
      9 •      2      6   3   1   2    14
      T•      C      0   C   0   0     1
      8 •     14     43  21  7  14   190
      C•      1      3   1   2   1     1
      •
      8 •    7  39  24   9  18   4  30   151
      T•     C  3   2   1   1   C   2     9
      9•     5  3C  18   7  14   3  23   100
      C•     8  14   8   5   5   7  14     9
      •
      7 •   5  34  29  43  46   6  2C   195
      T•    C   2   3   3   3   C   1    13
      8•    3  18  20  22  24   3  1C   100
      C     6  19  13  22  13  11   9    13
      •
      6 •   9  34  16  37  46   8  26   176
      T•    1   2   1   2   3   1   2    12
      8•    5  19   9  21  26   5  15   100
      C•   1C  13   5  19  13  15  12    12
      •
      5 •   5C  42  91  31  95  11  34   354
      T•    3   2   6   2   6   1   2    24
      8•   14  15  24   9  24   3  1C   400
      C•   57  19  31  16  23  2C  14    24
      •
      4 •   1C  95  77  39  90  11  49   351
      T•    1   5   5   3   6   1   3    24

  8•   3  21  22  11  26   3  14   100
  C•  11  24  26  22  25  2C  22    24
  •
  3 •   7  14  21  12  25   2  18    94
  T•    C   1   1   1   2   C   1     6
  8•    2  18  22  13  27   2  19   1CC
  C•    2   5   7   6   7   4   8     6

  2 •      9      7   6   3   8    33
  T•      1      0   0   0   1     2
  8•     27     21  18   4  24   100
  C•      3      4   5   4   4     2
  •
  1 •   9  11  24  12  27   3  35   143
  T•    C   1   2   1   3   1   2    10
  8•    3   8  17   9  33   6  24   1CC
  C•    6   4   8   6  13  14  14    10

  **************************************
  T  11   T    3   5   2
  Q5        2      4      6

  COLUMN  88   282  356  222
  TOTAL       176  154   84

  PERCENT  6   20   25   18
  TOTAL       18   13    4

  GRAND TOTAL=  1484
```

```
  CHI-SQUARE (OF TABLE)      195.55554
  DF,   41
```

```
  VALUES NOT ENTERED  11
  CASE NO.    VARIABLE  4    VARIABLE  8
     172           0            5
     385           6            C
     3CC           6            0
     39*           0            4
     395           4            0
     400           6            0
     4C7           6            0
     446           0            2
```

(Question 10)
I. Production, Management, and Social Sciences
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (26) Production and management
  (28) Psychology and human engineering

II. Medical Sciences
  (16) Medical sciences

III. Mechanical, Industrial, Civil, and Marine Engineering
  (11) Ground transportation equipment
  (13) Installations and constructions
  (18) Military sciences and operations
  (24) Photography and other reproduction processes
  (29) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation

IV Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided Missiles
  (19) Navigation

V. Electronics and Electrical Engineering
  (05) Communications
  (06) Detection
  (07) Electrical equipment
  (08) Electronics, electronic equipment

VI Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (22) Ordnance

VII. Physical Science
  (02) Astronomy, geophysics and geography
  (09) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (25) Physics
  (27) Propulsion systems

VIII. Research and Research Equipment
  (30) Research and research equipment

IX Mathematics
  (15) Mathematics

(Question 5)
I   (7) Hardware
II   (1) Technical data or information
III. (6) A design (includes specifications)
IV   (2) A finding
V   (3) A recommendation
VI. (4) A decision
VII (5) A plan

Table 3-12. Type of Task Output vs. Interviewers Assessment of Task Creativity

```
    Q5    IS CROSS TABULATED WITH    Q63    OR,

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE 12

NUMBER OF REPLICATIONS= 1900

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     3       7       1
    12       5       1
```

```
( 3)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q5
   7 •  5 55 65 98  223
   T•  0  4  4  7   15
   R•  2 25 29 44  100
   C•  9 20 12 16   15
   •
   6 •  2 11 19 21   55
   T•  0  1  1  1    4
   R•  4 24 35 38  100
   C•  4  5  3  3    4
   •
   5 •  9 67176115  367
   T•  1  4 12  8   25
   R•  2 18 48 31  100
   C• 16 24 32 19   25
   •
   4 •  5 30 87 75  197
   T•  0  2  6  5   13
   R•  3 15 44 38  100
   C•  9 11 16 12   13
   •
   3 •  7 48 78161  294
   T•  0  3  9 11   20
   R•  2 16 27 55  100
   C• 13 17 14 26   20
   •
   2 •  23 64107 77  271
   T•   2  4  7  5   18
```

(Question 5)
I.   (7)   Hardware
II.   (1)   Technical data or information
III.   (6)   A design (includes specifications)
IV.   (3)   A finding
V.   (3)   A recommendation
VI.   (4)   A decision
VII.   (5)   A plan

(Question 63)
I.   (1)   Communication of existing information
II.   (2)   Rearrangement of existing information, with little evaluation or analysis
III.   (3)   Extensive evaluation and analysis of existing data
IV.   (4)   Creation of new information, systems, or hardware

```
   R•  8 24 39 28  100
   C• 42 23 20 13   18
   •
   1 •  4  8 13 66   88
   T•  0  5  1  4    6
   R•  5  6 15 75  100
   C•  7  2  2 11    6
   •
   •••••••••••••••••••••
  (12)    1     3
  Q63           2     4

COLUMN   59    545
 TOTAL       262   613

PERCENT   4     36
 TOTAL        19    41

GRAND TOTAL= 1495

CHI-SQUARE (OF TABLE)      138.48610
DF=   18

VALUES NOT ENTERED   5
 CASE NO.     VARIABLE  3     VARIABLE 12
   385            0              3
   390            0              3
   399            0              4
   400            0              2
   400            0              3

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0257
MEAN( 12)=      3.14733   SD( 12)=      0.85055
MEAN(  3)=      4.01733   SD(  3)=      1.79755
```

Table 3-13. Task Recipient vs. Formality of Task Output

```
    Q7      IS CROSS TABULATED WITH    Q6      OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  4

NUMBER OF REPLICATIONS= 1590

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     5       3       1
     4       5       1


( 5)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q7
     5 •    1   2   2   1 16   22
      T•    0   0   0   0  1    1
      R•    5   9   9   5 73  100
      C•    7   2   1   2  2    1
       •
     4 •            2    43   45
      T•            0     3    3
      R•            4    96  100
      C•            1     4    3
       •
     3 •    1   9  33 31444  516
      T•    0   1   2   2 30   35
      R•    0   2   6   6 86  100
      C•    7   9  10  50 45   35
       •
     2 •   13 83285 30478  889
      T•    1   6  19   2 32   59
      R•    1   9  32   3 54  100
      C•   87  83  87  48 48   59
       •
     1 •        6   7       9   22
      T•        0   0       1    1
      R•       27  32      41  100
      C•        6   2       1    1
       •
      ••••••••••••••••••••••••
( 4)      1   3   5
```

(Question 7)
I.   (1) Individual's own use
II. (2) Individual(s) within the respondent's company
III. (5) A particular contractor or contractors
III. (6) Department of Defense
III. (7) NASA
IV. (3) Members of the respondent's profession
V.   (4) A major segment of an industry

(Question 6)
I.   (5) Hardware
II. (4) Informal briefing or discussion
III. (3) Informal document or memorandum
IV. (2) Formal briefing or demonstration
V.   (1) Formal document

```
Q6              2      4

COLUMN   15    329    990
 TOTAL     100    62

PERCENT   1     22    66
 TOTAL      7     4

GRAND TOTAL= 1496

CHI-SQUARE (OF TABLE)        450.30327
DF=  16

VALUES NOT ENTERED    4
   CASE NO.      VARIABLE  5       VARIABLE  4
     390              2                0
     828              0                5
     916              0                5
    1446              0                4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2996
MEAN( 4)=        4.27600   SD( 4)=        1.08287
MEAN( 5)=        3.43067   SD( 5)=        0.65941
```

Table 3-14. Kind of Work Position vs. Task Recipient

```
___ Q55   IS CROSS TABULATED WITH ___ Q7   9R2. __
VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  2
NUMBER OF REPLICATIONS= 1500
VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   9     12    1
   2      5    1
```

```
_ ( 9)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q55
  12 •    11 13    2   24
   T•      1  1    0    2
   R•     42 50    8  100
   C•      1  3    9    2

  11 •    2 41 15   3  2  63
   T•     0  3  1   0  0   4
   R•     3 65 24   5  3 100
   C•     9  5  3   7  9   4

  10 •    2 25 15       42
   T•     0  2  1        3
   R•     5 60 36      100
   C•     9  3  3        3

   9 •    56 12    1   69
   T•      4  1    0    3
   R•     81 17    1  100
   C•      6  7    5    1

        2 84 37       123
   T•    0  0  2        8
   R•    2 68 30      100
   C•    9  9  7        8

   7 •   3 98 41  4  3  149
   T•    0  7  3  0  0   10
```

```
   R•   2 66 28  3  2 100
   C•   14 11  8  9 14   10

   6 •   73 56  )  2  138
   T•     5  4  0  0    9
   R•    57 41  1  1  100
   C•     9 11  2  9    9

   5 •  1179 96  1  5  282
   T•    0 12  6  0  0   19
   R•    0 63 34  0  2  100
   C•    5 20 19  2 23   19

   4 •   4 72 67  1  2  146
   T•    0  5  4  0  0   10
   R•    3 49 46  1  1  100
   C•   18  8 13  2  9   10

   3 •   1 82 62     2  169
   T•    0  5  4     0   10
   R•    2 55 42     1  100
   C•   14  9 12     9   10

   2 •  4144 82 14     244
   T•   0 10  5  1      16
   R•    2 59 34  6    100
   C•   18 16 16 31     16

   1 •   1 18 22 21  3  65
   T•    0  1  1  1  0   4
   R•    2 28 34 32  5 100
   C•    5  2  4 47 14   4

        •••••••••••••••••••
   ( 2)   1    3    5
   Q7     2    4

   COLUMN   22  518   22
   TOTAL   889   45

   PERCENT   1   35    1
   TOTAL    59    3
```

```
GRAND TOTAL= 1496

CHI-SQUARE (OF TABLE)      293.92255
DF=   44

VALUES NOT ENTERED   4
  CASE NO.    VARIABLE  9   VARIABLE  2
    340          0           2
    828          7           0
    916          6           0
   1446          7           0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.1131
MEAN( 2)=   2.43067  SD( 2)=   0.65941
MEAN( 9)=   5.27667  SD( 9)=   2.76186
```

Table 3-15. Field of Work Position vs. Task Recipient

Q56 ___ IS CROSS TABULATED WITH   Q7   OR, ___

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE 4

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   10   5   1
    4   5   1

(10) ___   ___ (EXTREME RIGHT VALUE IS ROW TOTAL)
Q56

9 •	'8	4	5	27	
7•	1	C	C	2	
8•	67	15	15	100	
C•	2	1	11	2	
6 •	2	75	36	1	114
7•	C	5	2	0	8
8•	2	66	37	1	105
C•	5	8	7	4	8
7 •	5103	66	11	2	18°
7•	2	7	4	1	6	13
8•	3	53	35	6	1	100
C•	23	12	13	24	4	13
4 •	2114	31	8	4	139
7•	6	8	2	1	0	11
8•	1	72	14	5	3	100
C•	9	13	6	18	18	11
5 •	5246138	3	8	4C0
7•	C	16	9	0	1	27
8•	1	61	34	1	2	100
C•	23	28	27	7	36	27
8 8	7181166	1	3	336
7•	C	12	10	C	C	23

(Question 56)
I.   Production Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (23) Personnel and training
     (28) Production and management
     (28) Psychology and human engineering

II. Medical Sciences
     (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and constructions
     (18) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation

IV. Aeronautics and Space Technology
     (01) Aircraft and flight equipment
     (.2) Guided missiles
     (19) Navigation

V.   Electronics and Electrical Engineering
     '05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics, electronic equipment

VI. Chemical Science and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance

VII. Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (25) Physics
     (27) Propulsion systems

8•	2	54	43	C	1	100
C•	32	20	28	2	14	23
3 •		37	46			83
7•		2	3			4
8•		45	55			10°
C•		4	9			6
2 •		8	12	11		29
7•		2	1	1		2
8•		21	41	38		100
C•		1	2	24		2
1 •		1107	40	8	4	158
7•	C	7	3	C	0	11
8•	1	48	25	4	3	100
C•	5	12	8	13	18	11

VIII. Research and Research Equipment
     (30) Research and research equipment

IX   Mathematics
     (13) Mathematics

(Question 7)
I.   (1) Individual's own use
II   (2) Individual(s) within the respondent's company
III   (5) A particular contractor or contractors
III   (6) Department of Defense
III   (7) NASA
IV   (3) Members of the respondent's profession
V   (4) A major segment of an industry

•••••••••••••••••••••••••••

(4)   1   3   5
Q7   2   4

COLUMN 22   417   27
TOTAL   882   45

PERCENT   1   35   1
TOTAL   59   7

GRAND TOTAL= 1493

CHI-SQUARE (IF TABLE)   234.67023
DF= 32

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.5526
MEANI 4)=   3.44 17   SD(4)=   0.65941
MEAN(10)=   4.82 00   SD(10)=   1.98451

VALUES NOT ENTERED   7
  CASE NO.   VARIABLE 10   VARIABLE 4
    120   4   3
    122   0   2
    107   0   2
    538   0   2
    878   1   0
    918   3   0
   1446   2   0

Table 3-16. User's Equivalent GS Rating vs. Task Recipient

```
Q5B     IS CROSS TABULATED WITH     Q7    OR,

VARIABLE 11 IS CROSS TABULATED WITH     TABLE  4

NUMBER OF APPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   11      13      1
    4       9      1
```

```
(11)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q5B
 13 •       1      3      4
 T•         C      C      0
 R•        25     75    100
 C•         0      7      0
  •
 12 •       1      2      1      4
 T•         0      0      0      0
 R•        25     50     25    100
 C•         C      2      2      0
  •
 11 •       3      4      1      8
 T•         C      0      0      1
 R•        28     50     13    100
 C•         C      2      2      1
  •
 10 •   1 11  7  5  1    23
 T•     C  1  0  0  0     2
 R•     4 44 28 20  4   100
 C•     5  1  1 11  5     2
  •
  9 •     21 23  4  1    49
 T•        1  2  0  0     3
 R•       43 47  8  2   100
 C•        2  4  4  5     3
  •
  8 •   2 41 35  4  1    73
 T•     0  2  2  0  C     5
```

(Question 5B)

I.	(01)	GS-6 (under 6,000)
II.	(02)	GS-9 (6,000 - 7,999)
III.	(03)	GS-11 (8,000 - 10,349)
IV.	(04)	GS-12 (10,350 - 11,999)
V	(05)	GS-13 (12,000 - 13,999)
VI.	(06)	GS-14 (14,000 - 16,399)
VII.	(07)	GS-15 (16,500 - 18,999)
VIII.	(08)	GS-16 (19,000 - 20,999)
IX	(09)	GS-17 (21,000 - 23,999)
X	(10)	GS-18 (24,000 - 26,999)
XI.	(11)	Sp A (27,000 - 29,999)
XII.	(12)	Sp B (30,000 - 34,999)
XIII.	(13)	Sp C (over 35,000)

(Question 7)

I.	(1)	Individual's own use
II.	(2)	Individual(s) within the respondent's company
III	(5)	A particular contractor or contractors
III.	(6)	Department of Defense
III.	(7)	NASA
IV	(3)	Members of the respondent's profession
V.	(4)	A major segment of an industry

```
 R•   3 44 46  6  1   100
 C•   9  3  6  9  5     5
  •
  7 •   1 96 75  7  6   193
 T•     0  6  5  C  0    12
 R•     1 57 41  4  2   100
 C•     5 11 14 16 18    12
  •
  6 •   7157115  9  6   254
 T•     C .C  8  1  0    20
 R•     2 53 39  3  2   100
 C•    32 1F 22 20 27    25
  •
  5 •   3171104  5  3   285
 T•     0 11  7  C  0    19
 R•     1 60 36  2  1   100
 C•    14 15 20 11 14    19
  •
  4 •   2186 92  5  4   289
 T•     C 12  6  C  0    19
 R•     1 64 32  2  1   100
 C•     9 27 18 11 18    19
  •
  3 •   4195 56  1  2   258
 T•     C 13  4  0  C    17
 R•     2 76 22  C  1   100
 C•    18 22 11  2  9    17
  •
  2 •   2 16  8          26
 T•     0  1  1           2
 R•     7 64 25         100
 C•     C  2  2           2
  •
     ••••••••••••••••••••••••
 ( 4)    1     3     5
 Q7      2     4

COLUMN  22   51P    22
TOTAL   P9C    45

PERCENT  1    75    1
TOTAL   55     3
```

```
GRAND TOTAL =  1497

CHI-SQUARE (OF TABLE)      184.94922
DF=   44

VALUES NOT ENTERED     3
   CASE NO.     VARIABLE 11    VARIABLE 4
     828              7              0
     916              5              0
    1446             17              0
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.1943
MEAN(  4)=      2.43067   SD(  4)=       0.65941
MEAN( 11)=      5.27933   SD( 11)=       1.88282
```

Table 3-17. Class of Task Output vs. Kind of Task Output

OP   IS CROSS TABULATED WITH   C9   'S;

VARIABLE   5 IS CROSS TABULATED WITH VARIABLE   6

NUMBER OF REPLICATIONS= 1900

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    5   14   1
    6   12   1

(5)   (EXTREME RIGHT VALUE IS ROW TOTAL)
O6

14 •	5	5	5	6	5	10	2	2	1	2	5	56
T•	1	1	6	6	2	1	6	6	7	5	8	4
P•	16	16	9	11	7	19	4	4	2	4	9	100
C•	4	5	5	3	5	8	1	3	2	7	25	4

13 •	5	8	5	5	5	9	3	1	4	5	2	52
T•	C	1	0	0	5	1	0	C	6	7	0	3
8•	1	15	10	10	10	17	6	2	8	15	5	100
C•	2	5	3	3	3	3	8	2	1	9	7	10	3

12 •	3	15	2	6		1	6	9	2	5		1	57
T•	C	1	6	0		0	C	1	0	0		0	4
8•	5	33	12	11		2	11	16	4	5		2	100
C•	5	4	4	4		1	5	5	3	5		5	4

11 •	2	3	4	5	10		10	34	10	5			88
T•	1	C	C	0	1		1	2	1	0			6
8•	5	3	4	6	11		11	34	11	6			100
C•	5	2	3	3	6		5	49	17	7			6

10 •	13	40	39	23	23	17	21	46	2	5	10	2	241
T•	1	3	3	2	2	1	1	3	0	0	1	0	16
8•	5	17	16	10	10	7	5	19	1	2	4	1	100
C•	20	17	25	16	12	10	18	24	3	9	14	13	16

9 •	5	1	5	10	22	15	5	6	4	5	15	2	95
T•	C	0	1	1	1	1	0	C	C	1	1	0	5
8•	3	1	5	10	24	16	5	4	4	9	11	2	100
C•	5	C	5	7	12	9	4	2	6	14	14	10	6

8 •	3	18	29	6	11	2	12	37	6	2	14	3	141
T•	0	1	2	0	1	0	1	2	0	0	1	0	9
8•	2	13	21	4	8	4	9	23	4	1	10	2	100
C•	5	8	17	4	4	3	10	17	9	3	20	15	9

7 •	1	2	7	2	8	7	4	46	2	2	5		84
T•	C	C	C	C	1	C	C	3	C	C	0		6
P•	1	2	8	2	9	8	5	54	2	2	5		100
C•	2	0	4	1	4	4	3	24	3	3	7		6

6 •	10	35	1	9	6	3	3	3	3	1		1	75
T•	1	2	C	0	C	0	0	C	0	0		0	5
8•	13	47	1	12	8	4	4	4	4	1		1	100
C•	18	15	1	8	3	2	3	2	4	2		5	5

5 •		17	23	55	94	74	23	19	11	20	0	1	361
T•		5	2	4	8	5	2	1	1	1	1	0	24
8•		5	6	15	26	20	6	5	3	6	2	0	100
C•		14	13	37	50	45	19	10	16	34	12	5	24

4 •	7	21	17	3	3	16	15	8	1	1	2		94
T•	C	1	1	0	0	1	1	1	C	0	0		6
8•	7	22	18	3	3	17	16	9	1	1	2		100
C•	11	9	10	2	2	10	13	4	1	2	3		4

3 •	1	7	3				4	5			2		24
T•	C	0	C				0	0			0		2
8•	4	29	13				17	29			8		100
C•	2	3	2				3	4			3		2

2 •	23	41	18	19	0	5	6	1	1	1	6	3	129
T•	2	3	1	1	0	0	0	C	0	0	0	0	9
8•	18	32	14	15	4	4	5	1	1	1	5	2	100
C•	36	17	10	13	3	3	5	1	1	2	9	15	9

•••

| (6) | 1 | 3 | 5 | 7 | 9 | 11 | | | | | | |
| O6 | 2 | 4 | 6 | 8 | 10 | 12 | | | | | | |

| COLUMN | 64 | 173 | 188 | 118 | 69 | 63 | | | | | | |
| TOTAL | 245 | 147 | 163 | 190 | 58 | 20 | | | | | | |

| PROCENT | 4 | 12 | 13 | 8 | 5 | 5 | | | | | | |
| TOTAL | 16 | 10 | 11 | 13 | 4 | 1 | | | | | | |

(Question 8)

I	(1)	Concepts
III	(3)	Raw data
IV	(5)	Math aids and formulae compute programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII	(12)	Utilization
XIV	(2)	Cost and funding, administrative action

(Question 9)

I	(02)	Research - basic
II.	(01)	Research - applied
III	(11)	System analysis
IV	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X.	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

GRAND TOTAL= 1498

CHI-SQUARE (OF TABLE)   1315.98333
DF= 132

VALUES NOT ENTERED   2

CASE NO.	VARIABLE 5	VARIABLE 6
734	13	0
979	5	0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT C.1748
MEAN(5)=   5.43867   SD(5)=   2.85010
MEAN(6)=   7.38600   SD(6)=   3.26069

Table 3-18. Class of Task Output vs. Field of Task Output

```
     Q8    IS CROSS TABULATED WITH    Q10    8R,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE  8

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     6      14        1
     8      11        1


( 8)                    ((EXTREME RIGHT VALUE 1) ROW TOTAL)
Q8
14 •   14   1   8  17   9   3       3       35
   T•    1   0   1   1   1   0       0        4
   R•   25   2  19  34  16   9       9      100
   C•   10   3   9   5   3   2       2        4
     •
13 •    8   1   6  16  19   4       5       53
   T•    1   0   6   1   1   0       0        4
   R•   15   2  11  30  25   8       9      100
   C•    6   3   6   5   4   2       4        4
     •
12 •    8   6   2   9   9  12  11   1       56
   T•    1   0   0   1   1   1   1   0        4
   R•   14   7   4  16  16  21  20   2      100
   C•    6  12   2   2   2   7   6   1        4
     •
11 •   28       3   9  17  23   6   3       87
   T•    2       0   1   1   2   0   0        6
   R•   31       3  10  19  26   7   3      100
   C•   20       3   3   5  13   3   2        6
     •
10 •   13   6   6  63  63  35  43  12   2    240
   T•    1   0   0   4   4   2   3   1   0     16
   R•    4   3   3  26  26  15  18   5   1    100
   C•    7  18   6  18  18  19  22   9  14     16
     •
 9 •   10       8  13  26  11   8  12        93
   T•    1       1   1   2   1   1   1         6
   R•   11       9  19  28  12   9  13       100
   C•    7       9   5   7   6   4   9         6
     •
 8 •   16   2  15  37  27  16  12   3   1   141
   T•    1   0   1   2   2   1   1   0   0     9
   R•   11   1  11  26  19  11  16   4   1   100
   C•   11   6  16  11   8   9  11   4   7     9
     •
 7 •    8       3  29  23   7   7   9       86
   T•    1       0   2   2   0   0   1        6
   R•    9       3  34  27   9   8  10      100
   C•    6       3   8   6   4   4   7        6
     •
 6 •    3   7   3   8  14  29   7   4       75
   T•    0   0   0   1   1   2   0   0        6
   R•    4   9   4  11  19  39   9   5      100
   C•    2  21   3   2   4  16   4   3        5
     •
 5 •    2.    < 25 106 124  15  46  19   4   359
   T•    1   0   2   7   8   1   3   1   0     24
   R•    6   1   7  30  35   4  13   5   0   100
   C•   15   6  27  30  35   8  24  15   7    24
     •
 4 •    2   3      11   5   4  10  51  10    94
   T•    0   0       1   0   0   1   3   1     6
   R•    2   1      12   5   4  11  54  11   100
   C•    1   3       3   1   2   5  39  71     6
     •
 3 •    1   2   1   6   3   5   4   2       24
   T•    0   0   0   0   0   0   0   0        2
   R•    4   8   4  25  13  21  17   8      100
   C•    1   6   1   2   1   3   2   2        2
     •
 2 •   14   7  14  22  21  17  29   5      129
   T•    1   0   1   1   1   1   2   0        9
   R•   11   5  11  17  16  13  22   4      100
   C•   10  21  15   6   6   9  15   4        9
     •
 •••••••••••••••••••••••••••••••••••••
( 8)   1       3       5       7       9
Q10        2       4       6       8

COLUMN 143   94   354   193   14
TOTAL   33        351   181   131

PERCENT 10    6    24    13    1
TOTAL    2        23    12    9
```

Table 3-19. Kind of Task Output vs. Field of Task Output

Q9　　IS CROSS TABULATED WITH　　Q10　　CP.

VARIABLE 1 IS CROSS TABULATED WITH VARIABLE 2

NUMBER OF REPLICATIONS= 1500

VARIABLE PASSTUP RESTRUP (AS SPECIFIED)
| 1 | 12 | 1 |
| 2 | 11 | 1 |

(EXTREME RIGHT VALUE IS ROW TOTAL)

Q9											
12 •	5	1	3	2	3	3	1	1			17
T•	C	C	C	C	L	C	J	r			1
R•	2e	7	16	14	14	1e	5	5			100
C•	3	3	3	1	1	2	1	1			1
11 •	17	1	2	18	18	4	5	4			69
T•	1	C	C	1	1	C	C	C			5
R•	25	1	3	24	24	6	7	6			100
C•	12	5	2	5	5	2	3	3			5
10 •	4		6	23	16	8	3	2			57
T•	C		C	2	1	1	5	C			4
R•	1C	1C	4C	17	14	5	3				100
C•	4		4	7	3	4	2	2			4
9 •	24		1	5	10	17	2	4			9
T•	2		C	1	1	1	C	C			5
R•	3e		1	13	14	25	3	6			100
C•	10		2	3	3	5	1	3			5
8 •	12		8	56	46	22	27	11	1		189
T•	1		2	4	3	1	1	C			13
R•	6		4	3C	24	12	14	5	1		100
C•	8		5	16	15	12	14	13	5		13
7 •	15		10	2C	21	14	13	2c	4		116
T•	1		1	1	1	1	1	1	C		8

R•	13		5	17	18	12	11	1	2	100
C•	1C		11	4	6	8	7	1C	14	8
6 •	8	2	13	42	61	4	6	2e		163
T•	1	C	1	3	4	C	C	2		11
R•	5	1	5	26	37	3	4	16		100
C•	6	6	14	12	17	3	3	2C		11
5 •	11		15	47	70	14	23	8		189
T•	1		1	3	5	1	2	1		13
R•	6		8	25	37	7	12	4		100
C•	8		16	13	2C	8	12	6		13
4 •	6		6	45	48	1C	19	8	1	147
T•	C		C	3	3	1	1	1	C	10
R•	4		4	33	33	7	13	5	1	100
C•	4		5	14	14	6	12	6	7	10
3 •	12	2	12	56	12	4	23	23	1	172
T•	1	C	1	4	2	C	2	5		12
R•	7	2	1C	33	14	2	13	13	1	100
C•	8	5	19	16	4	2	12	16	7	12
2 •	18	14	11	25	32	8C	45	17	6	238
T•	1	1	1	2	2	4	3	1	C	16
R•	8	7	5	12	13	25	21	7	3	1C0
C•	13	45	12	8	5	35	24	13	43	16
1 •	7	1C	1		4	15	44		3	64
T•	C	1	C		1	1	1		C	4
R•	11	16	2		6	1	34		5	1C0
C•	5	4C	1		1	11	14		1	4

| (2) | 1 | 1 | | | | 7 | 1 | |
| Q10 | | 2 | | 4 | | 5 | 6 |

COLUMN 143
TOTAL

PERCENT
TOTAL

(Question 9)
I	(02)	Research - basic
II	(01)	Research - applied
III.	(11)	System analysis
IV	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII	(12)	Customer relations

(Question 10)
I　Production, Management and Social Sciences
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (28) Production and management
  (29) Psychology and human engineering

II.　Medical Sciences
  (16) Medical sciences

III　Mechanical, Industrial, Civil, and Marine Engineering
  (11) Ground transport equipment
  (13) Installations and constructions
  (15) Military sciences and operations
  (24) Photography and other reproduction processes
  (29) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation

IV　Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided missiles
  (19) Navigation

V　Electronics and Electrical Engineering
  (05) Communications
  (06) Detection
  (07) Electrical equipment
  (08) Electronic / electronic equipment

VI　Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (22) Ordnance

VII　Physical Science
  (02) Astronomy, geophysics and geography
  (09) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (25) Physics
  (27) Propulsion systems

VIII　Research and Research Equipment
  (30) Research and research equipment

IX　Mathematics
  (15) Mathematics

CHI-SQUARE (CF TABLE)　　541.38715
DF=　88

VALUES NOT ENTERED　8
CASE NO.	VARIABLE 1	VARIABLE 2
122	7	0
355	1	0
446	7	0
710	3	7
734	2	6
778	8	0
975	0	5
1491	2	C

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT = C.1413
MEAN(2)=　　　S.DEV(2)=　　1.96442
MEAN(1)=　　　S.DEV(1)=　　2.85016

Table 3-20 Discovery of Information Available, but Unknown, during Task vs. Kind of Task Output

```
     Q32     IS CROSS TABULATEC WITH      Q9      CR,

VARIABLE  3 IS CROSS TABULATEC WITH VARIABLE  1

NUMBER CF REPLICATIONS= .500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    3        2        1
    1       12        1


( 3)              (EXTREME RIGHT VALUE IS ROW TCTAL)
Q32                                                          (Question 32)
   2 •  2C  CC  43  23  42  29  23  29  1C  14   6   2  333   I.    (2)   No
   T•   1   4   2   3   2   2   2   2   1   1   1   0   2C    II    (1)   Yes
   R•   7  2C  15   8  14  1C   8   C   3   5   3   1  100
   C•  31  2?  25  16  22  12  15  15  14  24  12  1C   2C    (Question 9)
   •                                                          I.    (02)  Research - basic
   1 •  44175130124146134 95101 99  44  61  10 1195          II    (01)  Research - applied
   T•   3  12   9   2  10   9   6  11   4   3   4   1   80    III.  (11)  System analysis
   R•   4  15  11  1C  12  11   8  13   5   4   5   2  100    IV.   (03)  Development - advanced
   C•  69  79  75  64  78  82  81  85  86  76  58  9C   80    V.    (04)  Development - engineering
   •                                                          VI.   (08)  Development - operational system
   •••••••••••••• ••••••••••••••••••••••••••••••••••v        VII.  (06)  R&D support
  ( 1)   1   3   5   7   9   11                               VIII. (07)  Test or evaluation
  Q9      2   4   6   8   10   12                             IX.   (06)  Production processes
                                                             X.    (08)  Production end-items
  COLUMN  84  173  188  118   49   69                        XI.   (10)  Reliability or quality control
  TOTAL   235  147  143  15C   58   20                       XII   (12)  Customer relations

  PERCENT  4   12   13   8   5   5
  TOTAL   16   10   11  13   4   1

  GRAND TCTAL=  1458

  CHI-SQUARE (CF TABLE)        23.C5155
  DF=  11

  VALUES NCT ENTERED   2
    CASE NC.    VARIABLE  3     VARIABLE  1




     734                  2        0
     979                  1        0

(THE FOLLOWING COMPUTATIONS ARE BASED CN ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION CCEFFICIENT =C.C458
MEANL  1)=        5.40867   SD( 1)=        2.85010
MEANS  3)=        1.20207   SD( 3)=        0.4C212
```

Table 3-21. Type of Work Activity vs. Kind of Task Output

```
    Q54    IS CROSS TABULATED WITH    C9    OR,

  VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  6

  NUMBER OF PFPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     9        5        1
     6       12        1


  ( 9)           (EXTREME RIGHT VALUE IS ROW TOTAL)
  Q54
    5 •  13 48 46 28 32 33 ;8 36 13  6 15  7  295    (Question 54)
    T•    1  3  3  2  2  7  1  7  1  0  1  0   20    I.    (5)  Technical evaluation
    R•    4 16 16  9 11 11  6 12  4  2  5  2  100    II.   (4)  Scientific and Engineering (nonmanagement)
    C•   20 20 27 19 17 20 15 19 19 10 22 35   20    III.  (2)  Technical management
                                                     IV.   (1)  Administrative management
    4 •   1  1  4  1  5  4  2  1  2  5     2   28     V.    (3)  Both administrative and technical management
    T•    0  0  0  0  0  0  0  0  0  0     0    2
    R•    4  4 14  4 18 14  7  4  7 18     7  100    (Question 9)
    C•    2  0  2  1  3  2  7  1  3  9    10    2     I.    (02)  Research - basic
                                                     II.   (01)  Research - applied
    3 •   4 25 23 21 24 16 1C 17  7  8 1;     171    III.  (11)  System analysis
    T•    0  2  2  1  2  1  1  1  0  1  1     11     IV.   (03)  Development - advanced
    R•    2 17 13 12 14  9  6 10  4  5  7     100    V.    (04)  Development - engineering
    C•    6 12 13 14 13 10  8  9 10 14 17     11     VI.   (05)  Development - operational system
                                                     VII.  (06)  R&D support
    2 •  45146 74 88112 99 73 86 39 30 26  4  822    VIII. (07)  Test or evaluation
    T•    3 10  5  6  7  7  5  6  3  2  2  0   55     IX.   (08)  Production processes
    R•    5 18  9 11 14 12  9 10  5  4  3  0  100    X.    (09)  Production end-items
    C•   7C 61 43 60 60 61 62 45 57 52 38 20   55     XI.   (10)  Reliability or quality control
                                                     XII.  (12)  Customer relations
    1 •   1 14 26  9 15 11 15 50  8  9 16  7  181
    T•    0  1  2  1  1  1  1  3  1  1  1  0   12
    R•    1  8 14  5  8  6  8 28  4  5  9  4  100
    C•    2  6 15  6  8  7 13 26 12 16 23 35   12

      •••••••••••••••••••••••••••••••••••••••••
  ( 6)    1    3    5    7    9   11
```

```
  Q9          2    4    6    8    10   12

  CCLUMN     64  173  188  118   69   69
  TOTAL     236  147  163  190   58   20

  PERCENT     4   12   13    8    5    5
  TOTAL      16   10   11   13    4    1

  GRAND TOTAL= 1497

  CHI-SQUARE (CF TABLE)      149.3709+
  DF=  44

  VALUES NOT ENTERED    3
    CASE NO.    VARIABLE  9    VARIABLE  6
      734           2              0
      979           1              0
     1044           0              2

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT =0.0515
  MEAN( 9)=      5.40867   SD( 9)=      2.85010
  MEAN( 6)=      2.61867   SD( 6)=      1.30424
```

Table 3 22. Kind of Work Position vs. Kind of Task Output

```
   O55    IS CROSS TABULATED WITH __ _09 __ OR: _____

VARIABLE , IS CROSS TABULATED WITH VARIABLE 6

NUMBER CF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
      9      12      1
      6      12      1
```

```
( 9)             (EXTREME RIGHT VALUE IS ROW TOTAL)
055
  12 •     1   2   2   3   1   4   1   1   1   1   9    26
    T•     0   0   0   0   0   0   0   0   0   0   1    2
    R•     4   8   8  12   4  15   4   4   4   4  35   100
    C•     0   1   1   2   1   5   1   1   2   1  45    ?
     •
  11 •     3   3       1   3       6   2      45        63
    T•     0   0       0   0       0   0       3         4
    R•     5   5       2   5      13   3      71       100
    C•     1   2       1   2       3   3      65   ....  4
     •
  10 •         1   1       5   2   3   7  19   2   1    41
    T•         0   0       0   0   0   0   1   0   0     3
    R•         2   2      12   5   7  17  46   5   2   100
    C•         1   1       3   2   2  10  33   3   5     3
     •
   9 •     1   2   2   2   1   2  11  36   6   4   1    68
    T•     0   0   0   0   0   0   1   2   0   0   0     5
    R•     1   3   3   3   1   1  16  53   9   6   1   100
    C•     0   1   1   1   1   2   6  22  10   8   5     5
     •
   8 •     6   6       4   5   5  82   2   2  10   1   123
    T•     0   0       0   0   0   5   0   0   1   0     8
    R•     5   5       3   4   4  67   2   2   8   1   100
    C•     3   3       2   3   4  43   3   3  14   5     8
     •
   7 •     4  17  18   2  13   6  64  17   2   5   2    151
    T•     0   1   1   0   1   0   4   1   0   0   0     10
```

(Question 55)
I.	(12)	Research - basic
II.	(01)	Research - applied
III.	(11)	System analysis
IV.	(03)	Development - advanced
V.	(04)	Development - engineering
VI.	(05)	Development - operational system
VII.	(06)	R&D support
VIII.	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII.	(12)	Customer relations

(Question 9)
I.	(02)	Research - basic
II.	(01)	Research - applied
III.	(11)	System analysis
IV.	(03)	Development - advanced
V	(04)	Development - engineering
VI.	(05)	Development - operational system
VII.	(06)	R&D support
VIII.	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII.	(12)	Customer relations

```
  R•     3  11  12   1   9   4  42  11   1   3   1   1   100
  C•     6   7  10   1   7   4  54   9   3   9   3   5    10
   •
 6 •     1   3   9   7   8  75   8  14   5   8           1   139
  T•     0   0   1   0   1   5   1   1   0   1           0     9
  R•     1   2   6   5   6  54   6  10   4   6           1   100
  C•     2   4   5   5   4  46   7   7   7  14           5     9
   •
 5 •    13  21  26 124  41  10  25  10   6   4   2       282
  T•     1   1   2   8   3   1   2   1   0   0   0        19
  R•     5   7   9  44  15   4   9   4   2   1   1       100
  C•     5  12  18  66  25   8  13  14  10   6  10        19
   •
 4 •    14   7  87  19   4   2   8   2   2           1   146
  T•     1   0   6   1   0   0   1   0   0           0    10
  R•    10   5  60  13   3   1   5   1   1           1   100
  C•     6   4  59  10   2   2   4   3   3           5    10
   •
 3 •     8  85   7   6  18   9   8       5   1   2       149
  T•     1   6   0   0   1   1   1       0   0   0        10
  R•     5  57   5   4  12   6   5       3   1   1       100
  C•     3  45   5   3  11   8   4       9   1  10        10
   •
 2 •     8   4  19  12   8   4  12  11   2   3       1   244
  T•     1  11   1   1   1   0   1   1   0   0       0    16
  R•     3  67   8   5   3   2   5   5   1   1       0   100
  C•    13  65  11   8   4   2  10   6   3   5       5    16
   •
 1 •    51   9       1           3       1              65
  T•     3   1       0           0       0               4
  R•    78  14       2           5       2             100
  C•    80   4       1           2       2               4
   •
  ••••••••••••••••••••••••••••••••••••••••••••••
( 6)     1   3   5   7   9  1.
09       2   4   6   8  10  12

CCLUMN  64  173 188  118  69  69
TOTAL  235  147 163  189  58  20

PERCENT  4  12  13   8   5   5
TOTAL   16  10  11  13   4   2
```

```
GRAND TOTAL= 1497

CHI-SQUARE (CF TABLE)     4738.70886
DF= 121

VALUES NOT ENTERED     3
  CASE NO.     VARIABLE 9     VARIABLE 6
    340            0              8
    734            9              0
    979           10              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.6556
MEAN( 6)=     5.40867    SD( 6)=     2.85010
MEAN( 9)=     5.27667    SD( 9)=     2.76196
```

Table 3-22. Field of Work Position vs. Kind of Task Output

```
    Q5A    IS CROSS TABULATED WITH     Q9    QR,

  VARIABLE 10 IS CROSS TABULATED WITH VARIABLE  6

  NUMBER OF REPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
         15        5       1
          6       12       1
```

```
(10)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q5A
     9 •    3   8   5   2           5   2       1   1       27
     T•     1   1   2   0           0   0       0   0        2
     R•    11  30  19   7          19   7       4   4      100
     C•     5   3   3   1           4   1       2   1        2
     •
     8 •    3  12  22   6   7  24  14 16   3   3   1   1    114
     T•     0   1   1   0   0   2   1   1   0   0   0   0      6
     R•     3  11  19   5   6  21  12 16   3   3   1   1    100
     C•     5   5  13   4   4  14  12   9   4   5   1   5      8
     •
     7 •   19  51  20  19  21   3 15  26   3   5   4   1    187
     T•     1   3   1   1   1   0   1   2   0   0   0   0     13
     R•    10  27  11  10  11   2   8  14   2   3   2   1    100
     C•    10  21  12  13  11   2 13  14   4   8   6   5     13
     •
     6 •   17  54   6  12  11   3 13  15   9   7   6   5    158
     T•     1   4   0   1   1   0   1   1   1   0   0   0     11
     R•    11  34   4   8   7   2   8   9   6   4   4   3    100
     C•    27  23   3   8   6   2 11   8 13  12   9  25     11
     •
     5 •    3  29  34  52  71  73 26  59  11  12  26   3    399
     T•     0   2   2   3   5   5   2   4   1   1   2   0     27
     R•     1   7   9  13  18  18   7  15   3   3   7   1    100
     C•     5  12  20  33  38  45 22  31  16  21  38  15     27
     •
     4 •        36  47  47  54  44 19  50   7  18  13   1    336
     T•         2   3   3   4   3   1   3   0   1   1   0     22
     •
     •
     R•   11  14  14  16  13   6 15   2   5   4   0    100
     C•   15  27  32  29  27  16 26  10  31  19   5     22
     •
     3 •    3  16  18   1  15   6 11   6   1   2   1   4     84
     T•     0   1   1   0   1   0   1   0   0   0   0      6
     R•     4  19  21   1  18   7 13   7   1   2   1   5    100
     C•     5   7  10   1   8   4   9   3   1   3   1  20      4
     •
     2 •   10  16   1           1               1   1     30
     T•     1   1   0               0           0   0      2
     R•    33  53   3               3           3   3    100
     C•    16   7   1               1           1   5      2
     •
     1 •    6  17  20   8   9   9 13  13  34  10  16   4    159
     T•     0   1   1   1   1   1   1   1   2   1   1   0     11
     R•     4  11  13   5   6   6   8   8  21   6  17   3    100
     C•     9   7  12   5   5   6 11   7  50  17  23  20     11
     •
   •••••••••••••••••••••••••••••••••••••••••••
     ( 6)   1       3       5       7       9      11
     Q9         2       4       6       8      10      12

   COLUMN    64    173    188   116     68      69
     TOTAL    239   147   162   190     58      20

   PERCENT    4    12    13     8     5      5
   TOTAL          16    10    11    13     4      1

   GRAND TOTAL= 1454
```

```
   CHI-SQUARE (OF TABLE)          580.35701
   DF=  88

   VALUES NOT ENTERED   6
     CASE NO.     VARIABLE 10      VARIABLE  6
       120            0                7
       122            0                7
       197            0                6
       538            0                9
       734            6                0
       975            5                0
```

(Question 56)

I. Production, Management and Social Sciences
    (37) Miscellaneous arts and sciences
    (23) Personnel and training
    (36) Production and management
    (28) Psychology and human engineering

II. Medical Sciences
    (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
    (11) Ground transportation equipment
    (13) Installations and constructions
    (18) Military sciences and operations
    (24) Photography and other reproduction processes
    (29) Quartermaster equipment and supplies
    (31) Ships and marine equipment
    (35) Transportation

IV. Aeronautics and Space Technology
    (01) Aircraft and flight equipment
    (12) Guided missiles
    (19) Navigation

V. Electronics and Electrical Engineering
    (05) Communications
    (06) Detection
    (07) Electrical equipment
    (08) Electronics, electronic equipment

VI. Chemical Science and Materials
    (03) Chemical warfare equipment and materials
    (04) Chemistry
    (10) Fuels and combustion
    (14) Materials (nonmetallic)
    (17) Metallurgy
    (22) Ordnance

VII. Physical Science
    (02) Astronomy, geophysics and geography
    (09) Fluid mechanics
    (20) Nuclear physics and nuclear chemistry
    (21) Nuclear propulsion
    (25) Physics
    (27) Propulsion systems

VIII. Research and Research Equipment
    (30) Research and research equipment

IX. Mathematics
    (15) Mathematics

(Question 9)

I.	(02)	Research - basic
II	(01)	Research - applied
III.	(11)	System analysis
IV	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII.	(06)	R&D support
VIII	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
   EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
   CORRELATION COEFFICIENT =0.1343
   MEAN( 6)=      5.40967   SD( 6)=      2.85010
   MEAN( 10)=     4.82200   SD( 10)=     1.98451
```

Table 3-24. Kind of Task Output vs. User's Equivalent GS Rating

09 ___ IS CROSS TABULATED WITH   058   09.

VARIABLE 6 IS CROSS TABULATED WITH VARIABLE 11

NUMBER CF APPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   6   12   1
   11   13   1

```
: 6)                (EXTREME RIGHT VALUE IS ROW TOTAL)
09
  12 *    1  4  7  2  3  2  2  .           20
   T*     0  5  5  0  3  0  5  0            1
   R*     5  2C 35 10  5 10 10  5          100
   C*     0  1  2  1  1  3  4  4            1

  11 *   14 14 1C 14  9  2  1             69
   T*     1  1  1  1  1  0  0              5
   R*    23 26 14 20 12  3  1            100
   C*     6  6  3  5  4  3  2              5

  1C *    4 17  7 16  7  4  2         1    58
   T*     0  1  0  1  0  0  0         0     4
   R*     7 29 12 28 12  7  3         2   100
   C*    14  7  7  6  2  2  3        17     4

   9 *    2 18 2C 11 11  2  3  1  1        69
   T*     C  1  1  1  1  0  0  0  0         5
   R*     3 26 29 16 16  3  4  1  1       100
   C*     7  7  7  4  4  3  4  2  4         5

   8 *    6 54 39 41 26 1C  5  5  3  1    190
   T*     6  4  3  3  2  1  C  C  0  0     13
   R*     3 28 21 22 14  5  3  3  2  1    100
   C*    21 21 14 14  9  5  7 10 12 13     13

   T*     3 74 33 2C 20  9  5  2  2       118
   T*     0  2  2  1  1  1  1  0  0  0      8
```

(Question 9)
I.   (02)   Research - basic
II.   (01)   Research - applied
III.   (11)   System analysis
IV.   (03)   Development - advanced
V.   (04)   Development - engineering
VI.   (05)   Development - operational system
VII.   (06)   R&D support
VIII.   (07)   Test or evaluation
IX.   (08)   Production processes
X.   (09)   Production end-items
XI.   (10)   Reliability or quality control
XII.   (12)   Customer relations

(Question 58)
I.   (01)   GS-6 (under 6,000)
II.   (02)   GS-9 (6,000 - 7,999)
III.   (03)   GS-11 (9,000 - 10,249)
IV.   (04)   GS-12 (10,250 - 11,999)
V.   (05)   GS-13 (12,000 - 13,999)
VI.   (06)   GS-14 (14,000 - 16,499)
VII.   (07)   GS-15 (16,500 - 18,999)
VIII.   (08)   GS-16 (19,000 - 20,999)
IX.   (09)   GS-17 (21,000 - 23,999)
X.   (10)   GS-18 (24,000 - 26,999)
XI.   (11)   Sp A (27,000 - 29,999)
XII.   (12)   Sp B (30,000 - 34,999)
XIII.   (13)   Sp (over 35,000)

```
   R*    3 2C 28 17 17  8  4  2  2       100
   C*   11  5 11  7  7  5  7  4  8          8

   6 *   4 36 31 42 26 16  7  1          163
   T*    C  2  2  3  2  1  C  0           11
   R*    2 22 19 26 16 1C  4  1          100
   C*   14 14 11 15  9  9 10  2           11

   5 *    3 24 47 42 37 21 11  2  1      188
   T*     0  2  3  3  2  1  1  5  0        13
   R*     2 14 25 22 20 11  6  1  1      100
   C*    15  9 16 15 13 11 16  4  4       13

   4 *    16 22 20 18 41 1C  8       2    147
   T*      1  1  1  3  2  1  1       0     10
   R*     11 15  4 26 21  7  5       1    100
   C*      6  8  7 13 17 14 16      25     10

   3 *    2 22 31 32 37 25  7 10  6  1    173
   T*     C  1  2  2  2  2  0  1  0  0     12
   R*     1 13 18 18 21 14  4  6  3  1    100
   C*     7  5 11 11 13 14 10 20 24 13     12

   2 *    3 27 28 38 60 41 12 12  7  2  5  4    239
   T*     0  2  2  3  4  3  1  1  0  0  0  0     16
   R*     1 11 12 16 25 17  5  5  3  1  2  2    100
   C*    11 11 10 13 20 22 17 24 28 25100100     16

   1 *    1  2  8  7 16 16  4  5  4  1     64
   T*     C  C  1  C  1  1  C  C  C  C      4
   R*     2  3 13 11 25 25  6  8  6  2    100
   C*     4  1  3  2  5  9  6 1C 16 13      4
```

GRAND TOTAL= 1498

CHI-SQUARE (CF TABLES)   274.27993
DF= 121

VALUES NOT ENTERED   2
CASE NO.   VARIABLE 6   VARIABLE 11
   734   0   4
   979   0   3

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.2535
MEAN(11)=   5.27933   SD(11)=   1.88282
MEAN(6)=   5.40867   SD(6)=   2.85010

```
(11)      2    4    6    8   10   12
058          3    5    7    9   11   13

COLUMN   28   288   294   7C   25    5
TOTAL   257  286   184   49    8    4

PERCENT   2   19   20    5    2    C
TOTAL     17   19   12    3    1    0
```

Table 3-25   Interviewer's Assessment of Difficulty in Use of Information vs. Kind of Task Output


```
      001    IS CROSS TABULATED WITH    09    091

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 1900

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     10      4      1
      1     12      1


(10)              (EXTREME RIGHT VALUE IS ROW TOTAL)
001
    4 *   11  36   9  14  14   3   3  11   3           104
    T*    1   2   1   1   1   C   C   1   C             7
    R*   11  35   7  13  13   5   3  11   3           100
    C*   17  15   9  10   7   2   3   6   4            7

    3 *  39 177 121 112 120  57 70 108  43 32 39 10  972
    T*    3  12   8   7   8   6   5   7   3  2  3  1   65
    R*    4  18  12  12  13  10  7 11   4  3  4  1  100
    C*   61  74  70  76  80  80 59 57 62 55 57 50   85

    2 *    5   7  18  10  25  21 16 34   6 11 11  6  176
    T*    1   C   1   1   2   1  1  2   1  1  1  0   12
    R*    5   4  10   6  14  12 10 19   4  6  6  3  100
    C*   14   3  10   7  13  13 15 18  12 12 19 16 30  12

    1 *    3  15  25  11  25  42 27 37  15 15 19  4  244
    T*    C   1   2   1   2   3  2  C   1  1  1  0   16
    R*    2   6  10   5  13  17 11 15   6  6  8  2  100
    C*    8   8  14   7  13  26 23 19  22 26 28 20  16

    *********************************************
    (1)    1   3   5   7   9  11
    09         2   4   6   8  10  12

COLUMN  64  173  188  118  69  69
TOTAL  225  147  163  150  58  20


PERCENT   4   12   13   8   5   5
TOTAL    16   10   11   13   4   1

GRAND TOTAL= 1450

CHI-SQUARE (OF TABLE)        148.61381
DF=  33

VALUES NOT ENTERED   2
  CASE NO.     VARIABLE 10    VARIABLE  1
    734            3              0
    975            2              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.2346
MEAN( 1)=      5.40667   SD( 1)=    2.85010
MEAN( 10)=     2.62467   SD( 10)=   0.83602
```

(Question 01)
I.   (1)   Obvious or prescribed
II.   (2)   Entirely or largely independent of professional judgment
III.   (3)   Entirely or largely dependent upon professional judgment
IV.   (4)   Difficult, because methods and procedures were lacking

(Question 9)
I.   (02)   Research - basic
II.   (01)   Research - applied
III.   (11)   System analysis
IV.   (03)   Development - advanced
V.   (04)   Development - engineering
VI.   (05)   Development - operational system
VII.   (06)   R&D support
VIII. (07)   Test or evaluation
IX.   (08)   Production processes
X.   (09)   Production end-items
XI.   (10)   Reliability or quality control
XII.   (12)   Customer relations

Table 3-26. Interviewer's Assessment of Difficulty in
Acquisition of Information vs. Kind of
Task Output

```
    Q62    IS CROSS TABULATEC WITH    Q9    CR.

VARIABLE 11 IS CROSS TABULATEC WITH VARIABLE  1

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    11    3    1
    1    12    1


(11)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q62
    3 *  16 67 :0 26 39 1C 19 2C  6  5  6  1  237      (Question 62)
    T*   1  4  2  2  3  1  1  1  0  0  0  0   16      I.    (1)  Quite clear or obvious
    R*   7 26 11 11 16  4  6  8  3  2  3      103      II.   (2)  Fairly clear or obvious
    C*  25 26 19 18 21  6 13 11  9  9  5   16          III.  (3)  Neither clear nor obvious
    *
    2 * 25 115 53 75 82 98 55 58 35 27 38 11  764     (Question 9)
    T*   2  8  6  5  5  7  4  7  2  2  3  1   51       I.    (02)  Research - basic
    R*   4 16 12 1C 11 13  7 13  5  6  5  1  100       II.   (01)  Research - applied
    C*  45 5C 54 54 44 6C 47 52 51 47 55 55   51       III.  (11)  System analysis
    *                                                  IV.   (03)  Development - advanced
    1 *  15 53 54 42 67 55 48 12 28 26 25  8  497      V.    (04)  Development - engineering
    T*   1  4  4  3  4  4  3  5  2  2  2  1   33       VI.   (05)  Development - operational system
    R*   4 11 11  5 13 11 10 16  6  5  5  2  100       VII.  (06)  R&D support
    C*  3C 22 31 25 36 34 41 38 41 45 36 4C   33       VIII. (07)  Test or evaluation
    *                                                  IX.   (08)  Production processes
    *****************************************           X.    (09)  Production end-items
    ( 1)    1    3    5    7    9   11                  XI.   (10)  Reliability or quality control
    Q9      2    4    6    8   10   12                  XII.  (12)  Customer relations

COLUMN   64   173   188   118    65    69
TOTAL   235   147   163   150    58    20

PERCENT   4    12    13     8     5     5
TOTAL    16    1C    11    13     4     1

GRAND TOTAL= 1456




CHI-SQUARE (OF TABLE)       75.C0003
DF=   22

VALUES NOT ENTERED    2
  CASE NO.    VARIABLE 11    VARIABLE  1
    734          2              0
    975          1              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.1020
  MEAN( 1)=     5.4C967   SO( 1)=    2.85010
  MEAN( 11)=    1.62600   SO( 11)=   0.67620
```

Table 3-27. Interviewer's Assessment of Task Creativity vs. Kind of Task Output

```
Q63     IS CROSS TABULATED WITH      Q9      OR,

VARIABLE 12 IS CROSS TABULATED WITH VARIABLE  6

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   12       4       1
    6      12       1


(12)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q63
  4 *   46 127  42  81  84  78  35  59  25  20      7   619
    T*   3   8   3   5   6   5   2   4   2   1   1   0    41
    R*   7  21   7  13  14  13   6  10   4   3   2   1   100
    C*  72  53  24  55  45  48  30  31  36  14  14  35    41

  3 *   14  88  98  52  71  40  49  63  21  12  36   4   548
    T*   1   6   7   3   5   3   3   4   1   1   2   0    37
    R*   3  16  18   9  13   7   9  11   5   2   7   1   100
    C*  22  37  57  35  38  25  42  13  30  21  52  20    37

  2 *   3  21  27  12  29  38  28  61  15  21  18   8   281
    T*   0   1   2   1   2   3   2   4   1   1   1   1    19
    R*   1   7  10   4  10  14  10  22   5   7   6   3   100
    C*   5   6  16   8  15  23  24  32  22  36  26  40    19

  1 *   1   3   6   2   4   7   6   7   8   5   5   1    55
    T*   0   0   0   0   0   0   0   0   1   0   0   0     4
    R*   2   5  11   4   7  13  11  13  15   9   9   2   100
    C*   2   1   3   1   2   4   5   4  12   9   7   5     4

    ***********************************************
 ( 6)   1     3     5     7     9    11
 Q9        2     4     6     8    10    12

COLUMN  64   173   188   118   41   69
  TOTAL    215   147   163   190   58   20
```

<div style="float:right">

(Question 63)
I.   (1) Communication of existing information
II.   (2) Rearrangement of existing information,
           with little evaluation or analysis
III. (3) Extensive evaluation and analysis of existing data
IV.   (4) Creation of new information, systems, or hardware

(Question 9)
I.   (02) Research - basic
II.   (01) Research - applied
III. (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (05) Development - operational system
VII. (06) R&D support
VIII. (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII. (12) Customer relations

</div>

```
PERCENT   4    12    13    8    5    5
  TOTAL     16    10    11   13    4    1

GRAND TOTAL = 1498

CHI-SQUARE (OF TABLE)      202.98752
DF=  33

VALUES NOT ENTERED    2
  CASE NO.    VARIABLE 12    VARIABLE  6
   714            2              0
   979            2              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.2354
MEAN( 6) =      5.40867   SD( 6) =     2.85010
MEAN( 12) =     3.14733   SD( 12) =    0.95055
```

Table 3-28. Discovery of Information Availability, but Unknown,
during Task vs. Field of Task Output

```
Q32    IS CROSS TABULATED WITH    Q10    Q8.

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS 1520

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     5       2       1
     3       9       1


( 5)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q32
     2 =  24   8  10  69  75  37  41  26   5   302
     T+   2   1   1   5   5   2   3   2   0    20
     R+   8   3   6  23  24  12  16   0   2   100
     C+  17  24  19  70  21  20  21  20  36    20

     1 = 119  25 7628 2 9144192205   9  1191
     T+   8   2   5  19  19  10  10   7   1    88
     R+  10   2   6  24  23  12  13   9   1   100
     C+  83  76  81  80  79  80  79  80  64    80

          •••••••••••••••••••••••••••••Q9092
    ( 3)   1   3   5   7   9
    Q10          2   4   6   8         .. .. - - .

     COLUMN 1+3    94   354  192   16
     TOTAL   33  *51  182  131

     PERCENT 10   6   24   13    1
     TOTAL    2   23   12    2

     GRAND TOTAL = 1494

CHI-SQUARE (OF TABLE)        3.93187
(DF=   8

VALUES NOT ENTERED    6
    CASE NO.    VARIABLE  5    VARIABLE  3


     122              1           0
     395              1           7
     446              2           0
     710              1           0
     778              1           0
    1491              1           0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.0274
MEAN( 3)=    4.85067  SD( 3)=    1.96443
MEAN( 5)=    1.22247  SD( 5)=    0.40212
```

(Question 32)
I.   (2) No
II. (1) Yes

(Question 10)
I.   Production, Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (23) Personnel and training
     (26) Production and training
     (26) Psychology and human engineering

II. Medical Sciences
     (16) Medical sciences

III. Mechanical, Industrial, Civil, and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and constructions
     (18) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation

IV. Aeronautics and Space Technology
     (91) Aircraft and flight equipment
     (12) Guided missiles
     (19) Navigation

V.   Electronics and Electrical Engineering
     (05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics, electronic equipment

VI. Chemical Science and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance

VII. Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (25) Physics
     (27) Propulsion systems

VIII. Research and Research Equipment
     (30) Research and research equipment

IX. Mathematics
     (15) Mathematics

Table 3-29. Type of Work Activity vs. Field of Task Output

```
   094     IS CROSS TABULATED WITH     010     FO.

VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  7

NUMBER OF REPLICATIONS= 1500

VARIABLE  VARIABLE  MINIMUM  (AS SPECIFIED)
   9         5        1
   7         3        1


(  9)               (EXTREME RIGHT VALUE IS ROW TOTAL)
094
    5 *   46  11  19  63  62  25  34  23   3   292
   7*      3   1   1   4   2   2   2   0    20
   9*     16   4   7  22  21  10  12   9   1   100
   C*     32  13  20  19  10  16  19  19  21    20

    4 *    7   1   7   2   6   3   1   1    28
   7*      0   2   2   0   0   0   2   0     2
   9*     25   4  25   7  21  11   4   4   100
   C*      5   3   7   1   2   1   1   1     2

    3 *    9   4  10  50  46  16  21  15     11
   7*      1   1   1   3   3   1   1   1     12
   9*      5   2   6  25  27   9  12   8    100
   C*      6  12  11  14  13   9  11  11     11

    2 *   66  17  45 195 196 113 112  73  10   821
   7*      4   1   3  13  13   8   8   5   1    55
   9*      7   2   5  24  24  14  14   4   1   100
   C*     42  52  40  74  55  63  59  56  71    55

    1 *   21      13  41  46  19  25  17   1   181
   7*      1      1   3   3   1   2   1   0    12
   9*     12      7  23  24  10  14   9   1   100
   C*     19      14  12  12  11  13  13   7    12

     ••••••••63 5686 ••86 •6 •b6 •666 •••••••••••••••••••
   ( 7)    1       3       5       7       9


010            2     4     6     8

COLUMN 143    94   354   133    14
TOTA:         33   351   190   131

PERCENT       10         24    13    1
TOTAL         2    24    12     9

GRAND TOTAL=  1493

CHI-SQUARE (OF TABLE)        70.16190
DF=  32

VALUES NOT ENTERED    7
  CASE NO.     VARIABLE  9    VARIABLE  7
   123             5              0
   355             1              0
   446             2              0
   710             5              0
   773             5              0
  1044             0              6
  1491             2              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0967
MEAN(  9)=     4.55067    SD(  9)=    1.96442
MEAN(  7)=     7.61967    SD(  7)=    1.30424
```

(Question 54)
I.   (3)   Technical evaluation
II.   (4)   Scientific and Engineering (nonmanagement)
III. (2)   Technical management
IV.   (1)   Administrative management
V.   (3)   Both administrative and technical management

(Question 15)
I.   Production, Management and Social Sciences
      (23) Miscellaneous arts and sciences
      (25) Personnel and training
      (26) Production and management
      (28) Psychology and human engineering

II.   Medical Sciences
      (15) Medical sciences

III. Mechanical, Industrial, Civil, and Marine Engineering
      (11) Ground transportation equipment
      (13) Installations and constructions
      (19) Military sciences and operations
      (26) Photography and other reproduction processes
      (29) Quartermaster equipment and supplies
      (31) Ships and marine equipment
      (32) Transportation

IV.   Aeronautics and Space Technology
      (01) Aircraft and flight equipment
      (12) Guided missiles
      (18) Navigation

V.   Electronics and Electrical Engineering
      (05) Communications
      (06) Detection
      (07) Electrical equipment
      (08) Electronics, electronic equipment

VI.   Chemical Science and Materials
      (03) Chemical warfare equipment and materials
      (04) Chemistry
      (10) Fuels and combustion
      (14) Materials (nonmetallic)
      (17) Metallurgy
      (22) Ordnance

VII. Physical Science
      (02) Astronomy, geophysics and geography
      (09) Fluid mechanics
      (20) Nuclear physics and nuclear chemistry
      (21) Nuclear propulsion
      (25) Physics
      (27) Propulsion systems

VIII. Research and Research Equipment
      (30) Research and research equipment

IX.   Mathematics
      (15) Mathematics

Table 3-30.   Kind of Work Position vs. Field of Task Output

```
055    IS CROSS TABULATED WITH    010    OP,

VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  7

NUMBER OF REPLICATIONS= 1  TC

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      9        12        1
      7         6        1
```

(Krnotion 55)
I.   (02) Research - basic
II.   (01) Research - applied
III.   (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (06) Development - operational system
VII.   (05) R&D support
VIII.   (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production and items
XI.   (10) Reliability or quality control
XII.   (12) Customer reactions

(K notion 19)
I.   Production, Management, and Social Sciences
        (32) Miscellaneous arts and sciences
        (23) Personnel and training
        (25) Production and management
        (26) Psychology and human engineering

II.   Medical Sciences
        (18) Medical sciences

III.   Mechanical, Industrial, Civil, and Marine Engineering
        (11) Ground transportation equipment
        (13) Installations and constructions
        (16) Military sciences and operations
        (26) Photography and other reproduction processes
        (28) Quartermaster equipment and supplies
        (31) Ships and marine equipment
        (33) Transportation

IV.   Aeronautics and Space Technology
        (01) Aircraft and flight equipment
        (12) Guided Missiles
        (19) Navigation

V.   Electronics and Electrical Engineering
        (05) Communications
        (06) Detection
        (07) Electrical equipment
        (08) Electronics, electronic equipment

VI.   Chemical Science and Materials
        (03) Chemical warfare equipment and materials
        (04) Chemistry
        (10) Fuels and combustion
        (14) Materials (nonmetallic)
        (17) Metallurgy
        (22) Ordnance

VII.   Physical Science
        (02) Astronomy, geophysics and geography
        (09) Fluid mechanics
        (20) Nuclear physics and nuclear chemistry
        (21) Nuclear propulsion
        (26) Physics
        (27) Propulsion systems

VIII.   Research and Research Equipment
        (30) Research and research equipment

IX.   Mathematics
        (15) Mathematics

GRAND TOTAL= 1453

CHI-SQUARE (CF TABLE)   575.01430
DF= 88

VALUES NOT ENTERED   7
   CASE NO.   VARIABLE 9   VARIABLE 7
     122   7   0
     340   0   7
     395   7   0
     446   5   0
     710   5   0
     770   8   0
    1491   4   0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

CORRELATION COEFFICIENT = 0.1725
MEAN(7)=   4.45067   SD(7)=   1.96442
MEAN(9)=   5.27657   SD(9)=   2.76186

Table 3-51. Field of Work F s: kr vs. Field of Task Output

```
  056    IS CROSS TABULATED WITH      G10    OR,

VARIABLE 10 I          ABULATED WITH VARIABL' 7

NUMBER CF FPPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   10        9        1
    7        9        1


(10)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
056
    9 •    1     1   5   3   2   1   2 12    27
    7•    0     0   0   0   0   0   0  1     2
    8•    4     4  19  11   7   4   7 44   100
    C•    1     1   1   1   1   1   2 86     2
      •
    8 •   5  2   5   8   5   5   6 50      114
    7•    0  0   0   1   0   0   0  5        8
    8•    4  2   4   7   3   4   5 70      100
    C•    9  6   5   2   1   3   3 61        8
      •
    7 •   4     2  10   9 14141   7        187
    7•    6     0   1   1   1   9   0        13
    8•    2     1   5   5   7 75   4        100
    C•    3     2   3   3   8 73   4         13
      •
    6 •   2  2   2   9  4131   7   1       158
    7•    0  0   0   1   0   0   0  0        11
    8•    1  1   1   6   3 83   4   1      100
    C•    1  6   2   5   1 73   4   1        11
      •
    5 •   8  1   8 45308   7   7 14    1   399
    1•    1  0   1   3 21   0   0   1    0    27
    8•    2  0   2  11  77   2   2   6    0   100
    C•    6  3   9  13  87   4   4 11    7    27
      •
    4 •   9  1  9252  18  10  20  15    1   333
    7•    1  0   1  17   1   1   1   1    1    22
    8•    3  0   3  76   3   3   6   5    0   100
    C•    6  3  10  72   5   5 10 11    7     22
      •
    3 •   5     52 10   6   5   4   2     •5
    7•    0     3   1   0   0   0   0          6
    8•    6     62 12   7   6   5   2       100
    C•    3     56   3   2   3   2   2        6
      •
    2 •   1 26    2      1          30
    7•    0  2    0      0           2
    8•    3 87    7      3          100
    C•    3 74    1      1           2
      •
    1 •  108   1 14   9   5   5   7 10    159
    7•    7  0   1   1   0   0   0   1     11
    8•   68  1   9   6   3   3   4   0    100
    C•   76  3  15   3   1   2         11
      •
**************************************
( 7)    1     3     5     7     9
010           2     4     6     8

COLUMN 143     93    354    193    14
TOTAL     33    330    180    191

PERCENT  10     6    24    13     1
TOTAL     2    23    12     9

GRAND TOTAL=  1491

CHI-SQUARE (OF TABLE)        5710.17653
DF=  64

VALUES NOT ENTERED   9
  CASE NO.      VARIABLE 10      VARIABLE   7
    120            0                9
    122            0                0
    197            0                4
    305            6                0
    446            5                0
    538            0                6
    710            4                0
    778            4                0
   1491            4                0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

CORRELATION COEFFICIENT  0.6458
MEAN( 7)=      4.99(67   SD( 7)=      1.96442
MEAN( 10)=     4.82200   SD( 10)=     1.98451
```

(Question 10)
I. Production, Management and Social Sciences
   (32) Miscellaneous arts and sciences
   (23) Personnel and training
   (26) Production and management
   (28) Psychology and human engineering
II. Medical Sciences
   (16) Medical sciences
III. Mechanical, Industrial, Civil, and Marine Engineering
   (11) Ground transportation equipment
   (13) Installations and constructions
   (18) Military sciences and operations
   (24) Photography and other reproduction processes
   (29) Quartermaster equipment and supplies
   (31) Ships and marine equipment
   (33) Transportation
IV. Aeronautics and Space Technology
   (01) Aircraft and flight equipment
   (12) Guided Missiles
   (19) Navigation
V. Electronics and Electrical Engineering
   (05) Communications
   (06) Detection
   (07) Electrical equipment
   (08) Electronics, electronic equipment
VI. Chemical Science and Materials
   (03) Chemical warfare equipment and materials
   (04) Chemistry
   (10) Fuels and combustion
   (14) Materials (nonmetallic)
   (17) Metallurgy
   (22) Ordnance
VII. Physical Science
   (02) Astronomy, geophysics and geography
   (09) Fluid mechanics
   (20) Nuclear physics and nuclear chemistry
   (21) Nuclear propulsion
   (25) Physics
   (27) Propulsion systems
VIII. Research and Research Equipment
   (30) Research and research equipment
IX. Mathematics
   (15) Mathematics

(Question 56)
I. Production, Management and Social Sciences
   (32) Miscellaneous arts and sciences
   (23) Personnel and training
   (26) Production and management
   (28) Psychology and human engineering
II. Medical Sciences
   (16) Medical sciences
III. Mechanical, Industrial, Civil and Marine Engineering
   (11) Ground transportation equipment
   (13) Installations and constructions
   (18) Military sciences and operations
   (24) Photography and other reproduction processes
   (29) Quartermaster equipment and supplies
   (31) Ships and marine equipment
   (33) Transportation
IV. Aeronautics and Space Technology
   (01) Aircraft and flight equipment
   (12) Guided missiles
   (19) Navigation
V. Electronics and Electrical Engineering
   (05) Communications
   (06) Detection
   (07) Electrical equipment
   (08) Electronics, electronic equipment
VI. Chemical Science and Materials
   (03) Chemical warfare equipment and materials
   (04) Chemistry
   (10) Fuels and combustion
   (14) Materials (nonmetallic)
   (17) Metallurgy
   (22) Ordnance
VII. Physical Science
   (02) Astronomy, geophysics and geography
   (09) Fluid mechanics
   (20) Nuclear physics and nuclear chemistry
   (21) Nuclear propulsion
   (25) Physics
   (27) Propulsion systems
VIII. Research and Research Equipment
   (30) Research and research equipment
IX. Mathematics
   (15) Mathematics

Table 3-32. Field of Task Output vs. User's Equivalent GS Rating

```
___ 010 __ IS CROSS TABULATED WITH ___ 058 ___ OR; _____

VARIABLE  7 IS CROSS TABULATED WITH VARIABLE 11 _____

NUMBER OF REPLICATIONS= 1500 ____ __-_____ -_

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED) _____
    7       9       1
   11      13       1
```

```
( 7)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
010
    9 *       3  1  1  3  1  2  1  2              14
    T*       C  C  C  0  0  0  0  0               1
    **      21  7  7 21  7 14  7 14              100
    C*       1  0  0  1  1  3  2  8               1
    *
    R *    2 29 31 24 16 15 10  2  1  1          131
    T*     C  2  2  2  1  1  1  C  0  0           9
    R*     2 22 24 18 12 11  8  2  1  1          100
    C*     7 11 11  C  6  8 14  4  4 13           9
    *
    7 *    1 32 26 45 41 26  9  6  4  1  1       193
    T*     C  2  2  3  3  2  1  0  0  0           13
    **     1 17 13 23 21 13  5  3  2  1  1       100
    C*     4 13  9 16 14 14 13 12 16 13 20        13
    *
    6 *    1 20 26 38 40 26  8  6  3  1          181
    T*     0  2  2  3  3  2  1  1  0  0           12
    R*     1 17 14 21 22 14  4  4  2  1          100
    C*     4 12  9 13 14 14 11 16 12 13           12
    *
    5 *   15 65 75 65 70 37 12 10  5            334
    T*     1  4  5  4  5  2  1  1  0             24
    P*     4 18 21 18 20 10  3  3  1            100
    C*    54 25 26 23 24 20 17 20 20             24
    *
    4 *    2 62 68 63 70 55 16  9  2  3         351
    T*     0  4  5  4  5  4  1  1  0  0          23
```

```
    R*    1 18 19 18 20 16  5  3  1  1         100
    C*    7 24 24 22 24 30 23 18 12 38          23
    *
    3 *    3 12 27 20 14  8  5  1  4            94
    T*     0  1  2  1  1  1  0  0  0            6
    P*     3 13 29 21 15  9  5  1  4           100
    C*    11  5  9  7  5  4  7  2 16            6
    *
    :     2  5  4  9  3  2        1  3  4      33
   7<     C  C  C  1  0  0        0  0  0      2
    *     6 15 12 27  9  6        3  9 12     100
    C*    1  2  1  3  2  3       13 60100      2
    *
    1 *   4 22 30 25 26 13  6 12  3  1  1      143
    T*    0  1  2  2  2  1  0  1  0  0  0      10
    R*    3 15 21 17 18  9  4  8  2  1  1      100
    C*   14  5 10  9  9  7  9 24 12 13 20      10
    *
*****************************************************
  (11)    2     4     6     8    10    12
  058        3     5     7     9    11    13

COLUMN   28   289   289   70    25    5
TOTAL      258   285   184    49         8         4

PERCENT   2    19    19    5     2     C
TOTAL        17    19    12    3     1     0

GRAND TCTAL= 1494

CHI-SQUARE (OF TABLE)        367.56555
DF=   88

VALUES NOT ENTERED   6
CASE NO.      VARIABLE  7      VARIABLE 11
   172            0                6
   395            0                6
   446            0                6
   710            0                6
   778            0                5
  1491            0                6
```

(Question 10)

I.   Production, Management and Social Sciences
- (23) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II.   Medical Sciences
- (18) Medical sciences

III.   Mechanical, Industrial, Civil, and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (16) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV.   Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided Missiles
- (19) Navigation

V.   Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI.   Chemical Science and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (10) Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII   Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII.   Research and Research Equipment
- (30) Research and research equipment

IX.   Mathematics
- (1) Mathematics

(Question 58)
I.	(01)	GS-6 (under 6,000)
II.	(02)	GS-9 (6,000 - 7,999)
III.	(03)	GS-11 (8,000 - 10,249)
IV.	(04)	GS-12 (10,250 - 11,999)
V.	(05)	GS-13 (12,900 - 13,999)
VI.	(06)	GS-14 (14,000 - 16,499)
VII.	(07)	GS-15 (16,500 - 18,999)
VIII.	(08)	GS-16 (19,000 - 20,999)
IX.	(09)	GS-17 (21,000 - 23,999)
X.	(10)	GS-18 (24,000 - 26,999)
XI.	(11)	Sp A (27,000 - 29,999)
XII.	(12)	Sp B (30,000 - 34,999)
XIII.	(13)	Sp C (over 35,000)

THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE)

```
CORRELATION COEFFICIENT -0.0350
MEAN( 11)=      5.27943     SD( 11)=     1.88292
MEAN(  7)=      4.85067     SD(  7)=     1.96442
```

Table 3-3. Interviewer's Assessment of Difficulty in Use of
Information vs. Field of Task Output

```
____Q61___IS CROSS TABULATED WITH_____Q10____GR,_

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 15CC

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   10      4     1
    2     11     1


(10)               (EATREME RIGHT VALUE IS RCW TCTAL)
Q61
   4 *  14      5 26 14 1C 24   2   3  1C3
   T*   1  (    0  2  1  1  2   0   C    7
   R*  14      5 23 14 1C 23  -2   3  1CC
   C*  1C 21   5  7  4  8 12   2  21    7
   *
   3 *  76 15 632302411151 27  88   9  966
   T*   5  1   4 15 16  8  9   6   1   65
   R*   8  2   7 24 25 12 13   9   1  1CC
   C*  53 58 67 66 68 64 66 67 64    c5
   *
   2 *  23  3  5 41 35 2C 22 16   1  179
   T*   2  C  1  3  2  2  1  1   C   12
   R*  13  2  5 23 2C 1o 12  9   1  130
   C*  16  5 1C 12 10 18 11 12   7   12
   *
   1 *  3C  4 17 56 64 27 2C 25   1  244
   T*   2  C  1  4  4  2  1  2   0   16
   R*  12  2  7 23 26 11  8 1C   C  1CC
   C*  21 12 18 16 16 18 15 1C 19   7   16
   *
   ************************************
(2)      1    3    5    7    9
Q10         2    4    6    8

COLUMN 143   54   354   193   14
 TOTAL     33   351   181   131
```

(Question 61)
- I.   (1)   Obvious or prescribed
- II.   (2)   Entirely or largely independent of professional judgment
- III   (3)   Entirely or largely dependent upon professional judgment
- IV.   (4)   Difficult, because methods and procedures were lacking

(Question 10)
- I.   Production, Management and Social Sciences
  - (32) Miscellaneous arts and sciences
  - (23) Personnel and training
  - (28) Production and management
  - (28) Psychology and human engineering
- II.   Medical Sciences
  - (16) Medical sciences
- III.   Mechanical, Industrial, Civil, and Marine Engineering
  - (11) Ground transportation equipment
  - (13) Installations and constructions
  - (19) Military sciences and operations
  - (24) Photography and other reproduction processes
  - (29) Quartermaster equipment and supplies
  - (31) Ships and marine equipment
  - (33) Transportation
- IV.   Aeronautics and Space Technology
  - (01) Aircraft and flight equipment
  - (12) Guided Missiles
  - (19) Navigation
- V.   Electronics and Electrical Engineering
  - (05) Communications
  - (06) Detection
  - (07) Electrical equipment
  - (08) Electronics, electronic equipment
- VI.   Chemical Science and Materials
  - (03) Chemical warfare equipment and materials
  - (04) Chemistry
  - (10) Fuels and combustion
  - (14) Materials (nonmetallic)
  - (17) Metallurgy
  - (22) Ordnance
- VII   Physical Science
  - (02) Astronomy, geophysics and geography
  - (09) Fluid mechanics
  - (20) Nuclear physics and nuclear chemistry
  - (21) Nuclear propulsion
  - (25) Physics
  - (27) Propulsion systems
- VIII.   Research and Research Equipment
  - (30) Research and research equipment
- IX   Mathematics
  - (15) Mathematics

```
PERCENT 1C    6    24    13    1
 TOTAL     2    23    12    Y

GRAND TCTAL= 1454

CHI-SQUARE (.F TABLE)     55..16C
DF=  24

VALUES NCT ENTERED   6
  CASE NC.   VARIABLE 1C   VARIABLE  2
     122          3            0
     355          3            0
     446          3            0
     71C          3            0
     778          3            0
    1491          4            C

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.C25
MEAN( 2)=      4.85C67    SD( 2)=    1.96442
MEAN( 1C)=     2.62467    SD( 1C)=   0.83502
```

**Table 3-34. Interviewer's Assessment of Difficulty in
Acquisition of Information vs. Field of
Task Output**


```
        Q42    IS CROSS TABULATED WITH      Q10    CR:

VARIABLE 11 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     11      3       1
      2      11      1


  (11)              (EXTREME RIGHT VALUE IS ROW TOTAL)
 Q42
      3 •  19   7 13 52 55 24 45 16   5  236
      T•   1   0  1  3  4  2  3  1   0   16
      R•   8   3  6 22 23 10 19  7   2  100
      C•  13  21 14 15 16 13 23 12 36      16

      2 •  71  21 46184189 90 91 61   8  761
      T•   5   1  3 12 13  6  6  4   1   51
      R•   9   3  6 24 25 12 12  8   1  100
      C•  50  64 49 52 53 50 47 47 57      51

      1 •  53   5 35115110 67 57 55   1  497
      T•   4   0  2  8  7  4  4  4   0   35
      R•  11   1  7 23 22 13 11 11   0  100
      C•  37  15 37 33 31 37 30 41   7   33

     •••••••••••••••••••••••••••••••••
  ( 2)    1     3     5     7    9
  Q10           2     4     6    8

  COLUMN 143   54   354   193   14
  TOTAL    33       351   161   151

  PERCENT  10    6    24    13    1
  TOTAL     2    23    12     9

  GRAND TOTAL= 1494




  CHI-SQUARE (OF TABLE)         28.59258
  OF=    16

  VALUES NOT ENTERED    6
     CASE NO.      VARIABLE 11     VARIABLE  2
       122             2              0
       355             1              0
       446             2              0
        77             2              0
       776             3              0
      1451             2              0

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT   C.0165
  MEAN( 2)=      4.85067   SD( 2)=     1.96442
  MEAN( 11)=      .62600   SD( 11)=    0.67826
```

(Question 62)
I.   (1) Quite clear or obvious
II. (2) Fairly clear or obvious
III. (3) Neither clear nor obvious

(Question 10)
I.   Production, Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (23) Personnel and training
     (26) Production and management
     (28) Psychology and human engineering
II. Medical Sciences
     (16) Medical sciences
III. Mechanical, Industrial, Civil, and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and constructions
     (25) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation
IV. Aeronautics and Space Technology
     (01) Aircraft and flight equipment
     (12) Guided Missiles
     (19) Navigation
V.   Electronics and Electrical Engineering
     (05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics, electronic equipment
VI. Chemical Science and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance
VII. Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (26) Physics
     (27) Propulsion systems
VIII. Research and Research Equipment
     (30) Research and research equipment
IX. Mathematics
     (15) Mathematics

Table 3-35. Interviewer's Assessment of Task Creativity vs. Field of Task Output

```
    069    IS CROSS TABULATED WITH    Q10    OR,

VARIABLE 12 IS CROSS TABULATED WITH VARIABLE 7

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     12      4       1
      7      4       1


(12)              (EXTREME RIGHT VALUE IS ROW TOTAL)
069
   4 *   59 23 33115148 87 92 49  5  511
   T*    4  2  2  8 10  6  6  3  0   41
   R*   1C  4  5 15 24 14 15  8  1  100
   C*   41 70 35 33 42 48 48 13 36   41
   •
   3 *   43  9 341 3131 58 65 44  8  543
   T*    3  1  2 10  9  4  4  3  1   36
   R*    8  2  6 28 2A 11 12  8  1  100
   C*   3C 21 36 44 3/ 32 34 34 57   36
   •
   2 *   34    24 66 65 27 31 35  1  283
   T*    2     2  4  4  2  2  2  0   19
   R*   12     8 23 23 10 11 12  0  100
   7*   24    26 19 18 15 16 27  7   19
   •
   1 *    7  1  3 17 10  5  3  3   45
   T*     0  0  0  1  1  1  0  0    4
   R*    15  2  5 31 18 16  9  5  100
   C*     5  3  5  5  3  5  3  2    4
   •
   •••••••••••••••••••••••••••••
   7 11  1   3   5    7    4
Q10        2    4     6    8

COLUMN 143    94   354   193   14
TOTAL   33   351   IA1   131


PERCENT  10    6   24    13    1
TOTAL     2    25    1.    9

GRAND TOTAL= 1444

CHI-SQUARE (FF TABLE)        51.89079
DF=  24


VALUES NOT ENTERED   6
CASE NO.    VARIABLE 12    VARIABLE 7
   122           3             0
   395           3             0
   446           3             0
   710           4             0
   778           4             0
  1491           4             0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0295
MEAN( 7)=      4.85067    SD( 7)=   1.96442
MEAN( 12)=     3.14733    SD( 12)=  0.85053
```

(Question 69)

I.　(1)　Communication of existing information
II.　(2)　Rearrangement of existing information, with little evaluation or analysis
III.　(3)　Extensive evaluation and analysis of existing data
IV.　(4)　Creation of new information, systems, or hardware

(Question 10)

I.　Production, Management, and Social Sciences
　　(32)　Miscellaneous arts and sciences
　　(23)　Personnel and training
　　(36)　Production and management
　　(28)　Psychology and human engineering

II.　Medical Sciences
　　(16)　Medical sciences

III.　Mechanical, Industrial, Civil, and Marine Engineering
　　(11)　Ground transportation equipment
　　(13)　Installations and constructions
　　(18)　Military sciences and operations
　　(24)　Photography and other reproduction processes
　　(29)　Quartermaster equipment and supplies
　　(31)　Ships and marine equipment
　　(33)　Transportation

IV.　Aeronautics and Space Technology
　　(01)　Aircraft and flight equipment
　　(12)　Guided Missiles
　　(19)　Navigation

V.　Electronics and Electrical Engineering
　　(05)　Communications
　　(06)　Detection
　　(07)　Electrical equipment
　　(08)　Electronics, electronic equipment

VI.　Chemical Science and Materials
　　(03)　Chemical warfare equipment and materials
　　(04)　Chemistry
　　(10)　Fuels and combustion
　　(14)　Materials (nonmetallic)
　　(17)　Metallurgy
　　(22)　Ordnance

VII.　Physical Science
　　(02)　Astronomy, geophysics and geography
　　(09)　Fluid mechanics
　　(20)　Nuclear physics and nuclear chemistry
　　(21)　Nuclear propulsion
　　(25)　Physics
　　(27)　Propulsion systems

VIII.　Research and Research Equipment
　　(30)　Research and research equipment

IX.　Mathematics
　　(15)　Mathematics

Table 3-36.   Discovery of Information Available, but Unknown,
during Task vs. Type of Work Activity

```
    Q32    IS CROSS TABULATED WITH    Q54    OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE 10

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIPLE PINIMUM  (AS SPECIFIED)
      5      2      1
     10      5      1
```

```
( 5)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q32
  2 *  2716C 41 10 65  3C3
  1      2 11  3  1  4   20
   R*     5 53 14  3 21  1CC
  C*    15 19 24 36 22   23
  *
  1 * 15 763130 18230 i196
  T*  1/ 44  5  1 15   80
  R*  13 55 11  2 19  1CO
  C*  85 81 76 64 78   80
  *
  **********************
 (10)    1     3     5
Q54       2     4
```

(Question 32)
I.   (2)   No
II.   (1)   Yes

(Question 54)
I.   (5)   Technical evaluation
II.   (4)   Scientific and Engineering (non-management)
III. (2)   Technical management
IV.   (1)   Administrative management
V.   (3)   Both administrative and technical management

```
COLUMN 182   171   295
TOTAL   823    28

PERCENT  12    11    20
TOTAL    *5     2

GRAND TOTAL= 1459

CHI-SQUARE (CF TABLE)       5.E4798
DF=    4

VALUES NET ENTERED    I
   CASE NO.    VARIABLE  5    VARIABLE 10
```

```
   1044          2          0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME A-E EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0495
MEAN( 10)=    2.61867   SD( 10)=    1.30424
MEAN(  5)=    1.20267   SD(  5)=    0.40212
```

Table 3-37. Kind of Work Position vs. Discovery of
Information Available, but Unknown,
during Task

```
    Q55    IS CHCSS TABULATEC WITH    Q32    CR.
VARIABLE  C IS CRLSS TABULATEC WITH VARIABLE  3
NUMBER CF REPLICATICNS= 15CC
VARIABLE MAXIPLH PINIMUP  (AS SPECIFIEC)
      8       12       1
      3        2       1

( 8)           (EXTREME RIGHT VALUE IS RCW TCTAL)
Q55
   12 •  2C   6   26
   T•   1   .   2
   R•  77  23  1CC
   C•   2   <   2
    •
   11 •  54   5   49
   T•   4   1   4
   R•  86  14  15C
   C•   5   2   4
    •
   10 •  33   5   42
   T•   2   1   3
   R•  79  21  1CC
   C•   .   2   3
    •
    9 •  58  11  69
   T•   4   1   5
   R•  84  16  100
   C•   5   4   5
    •
    8 •  109  14  123
   T•   7   1   8
   R•  85  11  15C
   C•   5   5   8
    •
    7 •  117  34  151
   T•   8   2   10
```

(Question 55)
I.   (02) Research - basic
II.   (01) Research - applied
III. (11) System analysis
IV.   (03) Development - advanced
V.   (C4) Development - engineering
VI   (C5) Development - operational system
VII. (06) R&D support
VIII (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII. (12) Customer relations

(Question 32)
I.   (2) No
II.   (1) Yes

```
   R•  77  23  1CC
   C•  1C  .1  1C
    •
    6 •  112  27  139
   T•   7   2   9
   R•  81  19  1CC
   C•   9   5   9
    •
    5 •  21C  43  252
   T•  15   4   19
   R•  78  22  1CC
   C•  18  21  19
    •
    4 •  121  25  146
   T•   8   2   1C
   R•  83  17  1CC
   C•  1C   6   1C
    •
    3 •  115  3C  145
   T•   8   2   1C
   R•  8C  2C  1CC
   C•  1C  1C  1C
    •
    2 •  186  58  244
   T•  12   4   16
   R•  76  24  1CC
   C•  16  15  16
    •
    1 •  47  18  65
   T•   3   1   4
   R•  72  28  1CC
   C•   4   6   4
    •
    •••••••••••••
  ( 3)   1
Q32       2

CCLUMN 1155
 TOTAL    3C5

PERCENT  8C
 TUTAL    2C
```

GRAND TCTAL= 1459

CHI-SQUARE (CF TABLE)   14.6C690
DF=   11

VALUES NCT ENTERED   1
  CASE NO.   VARIABLE 8   VARIABLE 3
    34C   0   1

(THE FOLLOWING CCMPUTATIC.S ARE BASEC CN ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUCEC FRCM THE ABLVE TABLE).

CCRRELATICN CCEFFICIENT =C.C359
MEAN(3)•   1.2C267   SC(3)•   C.4C212
MEAN(8)•   5.27667   SC(8)•   2.76186

Table 3-38. Field of Work Position vs. Discovery of
Information Available, but Unknown,
during Task

```
    Q56    IS CROSS TABULATED WITH    G32    OF,

VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS= 150C

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        4       11       1
        3        2       1
```

```
 ( 9)              (EXTREME RIGHT VALUE IS PCN TCTAL)
Q56
  7 *   22   5    27
     T*    1   0     2
     R*   81  19   100
     C*    2   2     2
     *
  8 *   8C  24   114
     T*    6   2     8
     R*   79  21   1CC
     C*    8   8     8
     *
  7 *  144  43   187
     T*   10   3    13
     R*   77  23   1CC
     C*   12  14    13
     *
  6 *  13C  29   159
     T*    9   2    11
     R*   82  18   10C
     C*   11  1C    11
     *
  5 *  316  84   4CC
     T*   21   6    27
     R*   79  21   1CC
     C*   26  26    27
     *
  4 *  273  63   336
     T*   18   4    22
```

```
     R*   81  19   1CC
     C*   23  21    22
     *
  3 *   71  13    84
     T*    5   1     6
     R*   95  15   1CC
     C*    6   4     6
     *
  2 *   23   7    3C
     T*    2   C     2
     R*   77  23   100
     C*    2   2     2
     *
  1 *  124  35   159
     T*    6   2    11
     R*   78  22   13C
     C*   1C  12    11
     *
     *********+********
 ( 3)   1
Q32      2
```

(Question 56)
I.   Production, Management and Social Science
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (28) Production and management
  (29) Psychology and human engineering
II.   Medical Sciences
  (16) Medical sciences
III.   Mechanical, Industrial, Civil and Marine Engineering
  (11) Ground transportation equipment
  (13) Installations and constructions
  (18) Military science and operations
  (24) Photography and other reproduction processes
  (30) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation
IV.   Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided missiles
  (19) Navigation
V.   Electronics and Electrical Engineering
  (05) Communications
  (06) Detection
  (07) Electrical equipment
  (08) Electronics, electronic equipment
VI.   Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (22) Ordnance
VII.   Physical Science
  (02) Astronomy, geophysics and geography
  (09) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (26) Physics
  (27) Propulsion systems
VIII.   Research and Research Equipment
  (30) Research and research equipment
IX.   Mathematics
  (15) Mathematics

(Question 32)
I. (2) No
II. (1) Yes

```
                         CORRELATION CCEFFICIENT  C.0051
COLUMN1193               MEAN(  3)=    1.20267   SD(  3)=     0.40212
   TOTAL    3C3          MEAN(  9)=    4.822CC   SD(  9)=     1.98451

PERCENT  8C
   TOTAL    2C

GRAND TCTAL=  1456

CHI-SQUARE (CF TABLE)      3.64C81
DF=   8

VALUES NCT ENTERED    4
   CASE NO.     VARIABLE  9     VARIABLE  3
    12C            0              1
    122            0              1
    197            0              1
    536            0              2
```

(THE FOLLOWING COMPUTATIONS ARE BASED IN ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

Table 3-39. User's Equivalent GS Rating vs. Discovery of
Information Available, but Unknown,
during Task

(Question 5a)

I.	(01)	GS-... (under 6,000)
II.	(02)	GS-9 (6,000 - 7,999)
III	(03)	GS-11 (8,000 - 10,249)
IV	(04)	GS-12 (10,250 - 11,999)
V.	(05)	GS-13 (12,000 - 13,999)
VI	(06)	GS-14 (14,000 - 16,499)
VII	(07)	GS-15 (16,500 - 18,999)
VIII.	(08)	GS-16 (19,000 - 20,999)
IX	(09)	GS-17 (21,000 - 23,999)
X.	(10)	GS-18 (24,000 - 26,999)
XI	(11)	Sp A (27,000 - 29,999)
XII	(12)	Sp B (30,000 - 34,999)
XIII	(13)	Sp C, over 35,000)

(Question 32)
I. (4) No
II. (1) Yes

GRAND TOTAL = 1530

CHI-SQUARE (CF TABLE)   10.70892
DF = 11

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

CORRELATION COEFFICIENT 0.0254
MEAN(5)=   1.20767   SD(5)=   0.40212
MEAN(11)=   5.27933   SD(11)=   1.88282

Table 3-40. Evaluation of Company TIC vs. Use of Company TIC

```
    Q36    IS CROSS TABULATED WITH    Q35    CR.

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  4

NUMBER CF REPLICATICNS= 150

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       5      5      .
       4      4      1


( 5)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q36
    5 •   12151155 2C   946
    T•    C 17  9 42    48
    R•    C 25 14 A1   1CC
    C•    2 E3 E5 77    58
      •
    4 •      EC 36 69   165
    T•        9  3  6    13
    R•       3C 22 42   100
    C•       1E 2C 1C    13
      •
    3 •    3 3C 15 74   122
    T•     0  2  1  6    10
    R•     2 25 1z 61   1CC
    C•     5  5  8 11    10
      •
    2 •    4 22  9 15    5C
    T•     C  z  1  1     4
    R•     8 44 18 3C   1CC
    C•     7  7  5  z     4
      •
    1 •   53 1z  2  1    68
    T•     4  !  C  0     5
    R•    78 18  3  1   1CC
    C•    87  4  1  C     5
      •
       ****************** 30
  ( 4)   1     3
```

(Question 36)
I.   (5) Never use information center
II. (3) Center is too far from my work location
III. (4) Takes too long to get available information
IV. (2) Seldom get what is needed
V.   (1) Almost always find needed information

(Question 35)
I.   (4) Never
II. (3) Only on an as-needed basis
III. (2) Regularly-infrequently (once a month)
IV. (1) Regularly-frequently (twice or more a month)

```
Q3C            2      4

CCLUMN   e1   177
 TOTAL      334   679

PEP CENT  5     14
 TOTAL      27    54

GRAND TCTAL=  1751

CHI-SC *NE (CF TABLE)      877.C0759
DF=  .

VALUES NCT ENTERED 249

(THE FOLLOWING CCMPUTATICNS ARE BASED CN ALL DATA AS ENTERED
EVEN IF SCPE ARE EXCLUDED FRCM THE ABCVE TABLE).

CCRRELATICN (CEFFICIENT  3.24t7
MEAN(  4)=        3.14ECC   SD(  4)=      1.01989
MEAN(  5)=        3.+1933   SD(  5)=      1.92099
```

Table 3-41. Nature of Restrictions vs. Use of Company TIC

```
    Q43    IS CROSS TABULATED WITH     Q35    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2        3       1
     1        4       1


( 2)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q43

  3 •    2 11 12 40   65
    T•   0  2  2  8   12
    R•   3 17 18 62  100
    C•  12  9 17 12   12
    •
  2 •    7 4C 32 56  235
    T•   1  8  6 30   45
    R•   3 17 14 66  100
    C•  41 34 46 45   45
    •
  1 •    9 65 26 125 224
    T•   2 12  5 24   43
    R•   4 29 12 56  100
    C•  47 56 37 39   43
    •
       ••••••••••••••••L•••
  ( 1)   1     3
  Q35       2     4

  COLUMN   17    70
   TOTAL   116   32;

  PERCENT   3    13
   TOTAL   27    61

  GRAND TOTAL=   524
```

(Question 43)
I.   (1)   Proprietary
II.   (2)   Industrial Security
III. (3)   Both (1) and (2)

(Question 35)
I.   (4)   Never
II.   (3)   Only on an as-needed basis
III. (2)   Regularly-infrequently (once a month)
IV.   (1)   Regularly-frequently (twice or more a month)

```
CHI-SQUARE (OF TABLE)       12.39715
DF•   6

VALUES NOT ENTERED  976

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES.

CORRELATION COEFFICIENT  0.1315
MEAN(  1)•      3.14800    SD(  1)•     1.01986
MEAN(  2)•      0.59467    SD(  2)•     0.90494
```

Table 3-42. Nature of Difficulties vs. Use of Company TIC

```
    046    IS CROSS TABULATED WITH    035    OR.

VARIABLE  1 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       1       3       1
       2       4       1


 ( 1)              (EXTREME RIGHT VALUE IS ROW TOTAL)
 046
      3 •    6 61 37 142   244
      T•   1 10   6 23     39
      R•   2 25 15 50     100
      C•  29 44 37 39      39
      •
      2 •  14 72 50 198   334
      T•   2 11   8 32     53
      R•   4 22 15 59    100
      C•  17 51 50 54      53
      •
      1 •   1  7 13 27     48
      T•   0  1  2  4       8
      R•   2 15 27 56    100
      C•   5  5 13  7       8
      •
         ••••••••••••••••••
   ( 2)   1    3
  035       2    4

COLUMN   21  106
TOTAL   140  367

PERCENT   3   16
TOTAL    22   58

GRAND TOTAL=   628
```

(Question 46)
I.   Utility of Information
     (1)   Attributable to inside of company
     (2)   Attributable to outside of company
     (3)   Attributable to both
II.   Timely Acquisition of Information
     (4)   Attributable to inside of company
     (5)   Attributable to outside of company
     (6)   Attributable to both
III.   Timely Awareness of Information
     (7)   Attributable to inside of company
     (8)   Attributable to outside of company
     (9)   Attributable to both

(Question 35)
I.   (4)   Never
II.   (3)   Only on an as-needed basis
III.   (2)   Regularly-infrequent, (once a month)
IV.   (1)   Regularly-frequently (twice or more a month)

```
CHI-SQUARE (OF TABLE)      7.76770
DF=   6

VALUES NOT ENTERED 872

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE   TIC TABLE).

CORRELATION COEFFICIENT  0.1114
MEAN( 2)=        1.14800   SD( 2)=      1.01986
MEAN( 1)=        ..96933   SD( 1)=      1.20837
```

Table 3-43. Use of Company TIC vs. User's Highest Degree

```
     035    IS CRESS TABULATED WITH     050A    OR.

VARIABLE  1 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     1       4        1
    11       6        1


( 1)              (EXTREME RIGHT VALUE IS ROW TOTAL)
035
    4 *  7* 11?78183 15138  POO
    T*   5  1 25 12  1  9    54
    R*   9  1 47 23  2 17   100
    C*  39 41 45 62 58 RP    54
    *
    3 *  26 6131 43  2  9   217
    T*   2  C  9  ?  0  1    15
    R*  12  9 60 20  1  4   100
    C*  14 22 16 19  R  6    15
    *
    2 *  71  8242 61  8 1C  400
    T*   5  1 16  4  1  1    27
    R*  18  2 6C 15  ?  2   1CC
    C*  47 30 30 21 31  6    27
    *
    1 *  19  2 43  6  1       71
    T*   1  C  3  0  0        5
    R*  27  3 61  R  1      100
    C*  1C  7  5  2  4        5
    *
    *************************
(11)    1   3    5
050A      2    4    6

COLUMN 191  794   26
 TOTAL     27  293  157
```

<div style="float:right">

(Question 35)
I.	(4)	Never
II.	(3)	Only on an as-needed basis
III.	(2)	Regularly, infrequently (once a month)
IV.	(1)	Regularly-frequently (twice or more a month)

(Question 50A)
I.	(6)	None
II.	(1)	Associate's
III.	(2)	Bachelor's
IV.	(3)	Master's
V.	(4)	Professional
VI.	(5)	Doctor's

</div>

```
PERCENT  13   53   2
 TOTAL    2   20   11

GRAND TCTAL= 1488

CHI-SQUARE (CF TABLE)      128.66700
DF=   15

VALUES NOT ENTERED  22
  CASE NO.     VARIABLE  1     VARIABLE 11
    A4            0              4
    6F            0              1
   10C            0              1
   119            C              3
   363            0              3
   696            0              3
   697            0              4
   698            0              3
   803            0              4
  1310            C              2
  131C            0              1
  1324            0              1

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.2685
MEAN( 11)=       3.26733   SD( 11)=    1.29498
MEAN( 1)=        3.14900   SD( 1)=     1.01986
```

Table 3-44.   Use of Comp_ny TIC vs. Kind of Work Position

```
     Q35    IS CROSS TABULATED WITH    Q55    C6,

VARIABLE  1 IS CROSS TABULATED WITH VARIABLE  7

NUMBER CF REPLICATIONS= 15CC

VARIABLE PAXIPLM MINIMUM  (AS SPECIFIED)
       1      4      1
       7     12      1


(  11              !FXTREME RIGHT VALUE IS PCM TOTAL       (Question 35)
 Q35                                                       I.    (4)   Never
   4  *   6,155 77 51129 66 66 34 25 11 33 12   800        II.   (3)   Only on an as-needed basis
    T*    4 13  5  6  9  4  4  2  2  1  2  1     54         III.  (2)   Regularly-infrequently (once a month,
    R*    8 24 10 11 16  8  8  4  3  1  4  1    100         IV.   (1)   Regularly-frequently (twice or more a month)
    C*   94 81 52 62 46 48 44 28 37 27 52 50     54
    *                                                       (Question 55)
   ?  *   1 15 18 14 57 22 25 31 10  7  7  2    217         I.    (02)  Research - basic
    T*    C  1  1  1  4  1  2  2  1  0  0  0     15          II.   (01)  Research - applied
    R*    C  S  P  6 26 10 13 14  5  3  3  1    1C0         III.  (11)  System analysis
    C*    2  8 12 10 20 16 19 25 15 17 11  8     15         IV.   (03)  Development - advanced
    *                                                       V.    (04)  Development - engineering
   2  *   2 25 47 36 85 45 45 47 28 15 19  5    400         VI.   (05)  Development - operational system
    T*    C  2  3  7  6  3  3  3  2  1  1  0     27          VII   (06)  R&D support
    R*    C  6 12  9 21 11 11 12  7  4  5  1    100         VIII. (07)  Test or evaluation
    C*    3 1C 32 25 30 33 3C 39 41 37 30 25     27         IX.   (08)  Production processes
    *                                                       X.    (09)  Production end items
   1  *   1  2  4  5  9  5 11 1C  5  8  4  4     70          XI.   (10)  Reliability or quality control
    T*    C  C  1  0  1  0  1  1  C  1  0  0      5          XII.  (12)  Customer relations
    P*    1  3     7 13  7 16 14  7 11  6  6    10C
    C*    2  1  4  3  3  4  7  8  7 20  6 17      5
    *
        **********************************************
 (  T;   1     ?     5     7     9    11
 Q55          2     4     6     8    10    12

 COLUMN  65   148   290   151   68    63
  TOTAL      241   146   138   122   41    24
```

```
 PERCENT  4   1C   19   10    5    4
   TOTAL      16   10    9    8    3    2

 GRAND TCTAL= 1497

 CHI-SQUARE (CF TABLE)       724.36556
  DF=  33

 VALUES NOT ENTERED  13
    CASE NO.     VARIABLE  1    VARIABLE  7
      64            0             2
      63            0             5
     109            0             5
     115            0            12
     340            1             0
     363            0             8
     694            0             6
     647            3             2
     698            0             3
     803            0             2
     131C           0            10
     131S           0             9
     1324           0            12

 (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SCME ARE EXCLUDED FROM THE ABOVE TABLE).

 CORRELATION COEFFICIENT -C.2668
  MEAN(  7)=        5.27667   SE(  7)=    2.76186
  MEAN(  1)=        3.1480C   SD(  1)=    1.01984
```

Table 3-45. Use of Company TIC vs. Field of Work Position

```
        C35    IS CRCSS TABULATEC WITH      C56     OR.

   VARIABLE  1 IS CRCSS TABULATEC WITH VARIABLE  R

   NUMBER CF REPLICATIONS= 1900

   VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
          1       4       1
          R       5       1


   ( 1)               (EXTREME RIGHT VALUE IS ROW TOTAL)
   035
      <  C   75 27 3816219112410S 52 20   79R
         Y*    5   2   3 11 13  R  7   4  1   54
         R*    5   3   5 20 24 14 14  7  3  100
         C*    4  94 45 43 48 78 55 47 74   54
         
         S *  13      9 40 61 17 28 21  2  216
         T*    1      1  4  4  1  2  1  C   15
         D*    R      4 28 28  R 13 10  1  100
         C*   13     11 18 15 11 15 19  7   15
         
         ?.*  57   3 32 56 120 15 4C 34  3  400
         T*    4   0  2  5  6  1  3  2  0   27
         R*   14   1  P 24 30  4 10  P  1  100
         C*   17  1C 5C 29 3C  5 22 31 11   27
         
       I *   5      4 18 22  3  6  3  2   70
         T*    1      C  4  1  C  1  C  0    5
         D*   13      6 26 31  4 13  4  3  100
         C*    6      5  5  6  2  5  3  7    5

   *********************************
   ( R)    1       3       5       7       9
   056             2       4       6       8

   COLUMN 15C     R3     394     1R6     27
   TOTAL   1C     4C    33C     155    11C


   PERCENT  11       6      27      13      2
   TOTAL    2       27      11       7

   GRAND TOTAL=  1484

   CHI-SQUARE (OF TABLE)           61.9R632
   DF=  24

   VALUES NOT ENTERED  IN
   CASE NC.    VARIARI   1    VARIABLE   R
     64           0                   *
     6P           0                   5
    109           0                   5
    11S           0                   3
    12C           1                   n
    12i           4                   n
    197           3                   C
    3£3           n                   5
    53P           5                   C
    n5i           0                   R
    457           n                   R
    6RP           0                   R
    RC3           0                   7
   111C           n                   5
   131S           0                   5
   11i4           n                   5

   (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
   EVEN IF SCME ARE EXCLUDED FROM THE ABOVE TABLE).

   CORRELATION COEFFICIENT  0.0654
   MEAN( R)=      4.R720C   SD( R)=      1.98451
   MEAN( 1)=      3.1490C   SD( 1)=      1.01986
```

(Question 35)
I.   (4)   Never
II.   (3)   Only on an as-needed basis
III. (2)   Regularly-infrequently (once a month)
IV   (1)   Regularly-frequently (twice or more a month)

(Question 56)
I.   Production, Management and Social Sciences
    (32) Miscellaneous arts and sciences
    (23) Personnel and training
    (2C) Production and management
    (28) Psychology and human engineering

II.   Medical Sciences
    (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
    (11) Ground transportation equipment
    (13) Installations and constructions
    (18) Military sciences and operations
    (24) Photography and other reproduction processes
    (29) Quartermaster equipment and supplies
    (31) Ships and marine equipment
    (33) Transportation

IV. Aeronautics and Space Technology
    (01) Aircraft and flight equipment
    (12) Guided missiles
    (19) Navigation

V.   Electronics and Electrical Engineering
    (05) Communications
    (06) Detection
    (07) Electrical equipment
    (08) Electronics, electronic equipment

VI. Chemical Science and Materials
    (03) Chemical warfare equipment and materials
    (04) Chemistry
    (10) Fuels and combustion
    (14) Materials (nonmetallic)
    (17) Metallurgy
    (22) Ordnance

VII. Physical Science
    (02) Astronomy, geophysics and geography
    (09) Fluid mechanics
    (20) Nuclear physics and nuclear chemistry
    (21) Nuclear propulsion
    (25) Physics
    (27) Propulsion systems

VIII. Research and Research Equipment
    (30) Research and research equipment

IX. Mathematics
    (15) Mathematics

Table 3-46. Interviewer's Assessment of User's Information
Needs vs. Use of Company TIC

```
     Q55    IS CROSS TABULATED WITH     C35    OR,

   VARIABLE 10 IS CROSS TABULATED WITH VARIABLE  1

   NUMBER CF REPLICATICNS= 1500

   VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       10        4        1
        1        4        1


    (10)              (EXTREME RIGHT VALUE IS RCW TOTAL)
    Q59
       3 *    6 6P 52\55  481
       T*     0   5   3 24    32
       P*     1 14 11 74   1CC
       C*     8 17 24 44    32
        *
       2 *  252C511637E   724
       T*     2 14   8 25    49
       R*     3 2P 16 52   1C0
       C*    35 51 53 47    49
        *
       1 *  4C127 49 67   283
       T*     3  5  3  5    19
       P*    14 45 17 24   1CC
       C*    56 32 23  8    19
        *
             ***************
    ( 1)    1     3
    Q35           2     4

    COLUMN   71   217
    TOTAL    4CC   900

    PERCENT   5    15
    TOTAL    27    54

    GRAND TCTAL= 1498
```

(Question 59)
I.   (3)   Insignificant need
II.   (2)   Moderate need
III. (1)   Large need

(Question 35)
I.   (4)   Never
II.   (3)   Only on an as-needed basis
III. (2)   Regularly-infrequently (once a month)
IV.   (1)   Regularly-frequently (twice or more a month)

```
   CHI-SQUARE (CF TABLE)     221.93657
   DF=    6

   VALUES NOT ENTERED   12
     CASE NO.    VARIABLE 1C    VARIABLE  1
        64          1              0
        6P          2              0
       1C9          2              0
       115          1              C
       363          1              0
       65E          1              0
       657          1              0
       69A          1              C
       8C3          3              0
       131C         1              C
       1319         2              0
       1324         2              0
```

(THE FCLLCWING CCMPUTATICNS ARE BASED CN ALL DATA AS ENTERED
EVEN IF SCME ARE EXCLUDED FRCM THE ABOVE TABLE).

```
   CORRELATION CCEFFICIENT  C.3748
   MEAN(  1)=      3.14800   SC(  1)=      1.C1986
   MEAN( 1C)=      2.128CC   SC( 10)=      0.7C613
```

Table 3-47. Use of STAR vs. Use of TAB

```
     Q3A    IS CROSS TABULATED WITH    Q37     OR,

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  2

NUMBER CF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     3       5      1
     2       5      1


(  3)                   (EXTREME RIGHT VALUE IS ROW TCTAL)
Q3A
   5 *  1C   7   4   7 7C   54
      T*   1   C   C   C   5    6
      R*  11   3   4   7 74  1CO
      C*   2   1   2   6 34    6
      *
   4 *  11   3   7 27 18   70
      T*   1   C   C   2   1    5
      R*  16  1C  13 39 26  1CC
      C*   2   2   * 23   9    5
      *
   3 *  18   9  51 13 21  112
      T*   1   1   3   1   1    7
      R*  16   8 46 12 19  1CC
      C*   3   7 25 11 10    7
      *
   2 *  34 147 35 23 3C  269
      T*   2  1C   2   2   2   18
      R*  13  55 13   5 11  1GC
      C*   5  45   20 15   18
      *
   1 *  576 155 1C6 47 67  955
      T*  38  11   7   3   4   64
      R*  6C  17 11   5   7  1CC
      C*  89  45 52 40 33   64
      *
      **********************
   (  2)    1     3    5
```

(Question 38)
I.	(5)	Do not know of STAR
II.	(4)	Never
III.	(3)	About once every six months
IV.	(2)	Once every 2 or 3 months
V	(1)	Every issue or almost every issue

(Question 37)
I.	(5)	Do not know of TAB
II.	(6)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

```
Q37 _____ 2 _   4

CCLUMN 645  2C3  206
  TOTAL     338  117

PERCENT 43   14   14
  TOTAL     22   8

GRAND TOTAL= 1500

CHI-SQUARE (CF TABLE)       839.53193
DF=  16

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.5049
MEAN(  2)*      3.27667   SD(  2)*     1.42972
MEAN(  3)*      1.71933   SD(  3)*     1.17650
```

Table 3-48. Use of DDC vs. Use of TAB

```
_____035__ IS CROSS TABULATED WITH ____037__ _ OR, _____

VARIABLE  4 IS CROSS TABLLATED WITH VARIABLE  2

U-BER CF REPLICATIONS= 150C

VARIABLE MAXIPUM MINIMUM  (AS SPECIFIED)
     4      3      1
     2      5      1


( 4)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q39
     3 * 14214213C 50175  679
     T*  5  5  9  6 12     45
     P*  21 71 15 13 26   100
     C*  22 44 64 77 85    45
     *
     2 * 137132 41 18 23  348
     T*  5  5  3  1  1     23
     R*  35 36 12  5  6   100
     C*  21 41 2C 15 10    23
     *
     1 * 37C 51 32  9 11  473
     T*  25  3  2  1  1    32
     R*  78 11  7  2  2   1C0
     C*  57 16 16  8  5    32
     *
     ****************************
( 2)    1    3    5
Q37     2    4

CCLUMN 645  2C3  206
TOTAL     325  117

PERCENT 43  14   14
TOTAL     22   P

GRAND TCTAL= 150C
```


(Question 39)
I.   (3) Do not know of DDC
II. (2) Know of DDC, but do not use it
II. (5) Use other sources instead
II. (4) Not relevant
III. (1) Yes

(Question 37)
I.   (5) Do not know of TAB
II. (4) Never
III. (3) About once every 6 months
IV. (2) Once every 2 or 3 months
V.   (1) Every issue or almost every issue

```
CHI-SQUARE (CF TABLE) ___497.C8937 __
DF=   P

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.4981
MEAN(  2)*      2.27C67  SD(  2)*     1.42972
MEAN(  4)*      2.13733  SD(  4)*     C.86582
```

Table 3-49. Use of DOD Specialized Information Centers vs. Use of TAB

```
     O4C     IS CROSS TABULATEC WITH     Q37     CR,

   VARIABLE  5 IS CROSS TABULATEC WITH VARIABLE  2

   NUMBER CF REPLICATIONS= 150C

   VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        5       3      1
        2       5      1


   ( 5)            (EXTREME RIGHT VALUE IS ROW TOTAL)
   Q40
        3 * 2161  110 63135  661
        T*  14   9   7   9   9    44          (Question 40)
        P*  33  21  17 1C 2C  1C0             I.    (29)  Do not know of such centers
        C*  33  42 54 *4 66    44             II.   (31)  Use other sources instead
        *                                     III   (30)  Not relevant
        2 * 111 P2 37 3C 30  250              IV.  (1-28)  Use centers
        T*  7   5   2   2   2   15
        P*  38 7F 13 10 10  1C0               (Question 37)
        C*  17 25 18 2E 15    19              I.    (5)   Do not know of TAB
        *                                     II.   (4)   Never
        1 * 32216A 56 24 41  545             III.   (3)   About once every 5 months
        T*  21   7   4   2   3    37          IV.    (2)   Once every 2 or 3 months
        P*  55 15 10   4   7  1CC             V.     (1)   Every issue or almost every issue
        C*  5C 73 7R 21 20    37
        *
        *******************
        ( 2)   1    3    5
        Q37         2    4

   COLUMN 64S    2C3   205
   TOTAL      32F   117

   PERCENT  43   14   14
   TOTAL      22    9

   GRAND TOTAL=  150C
```

```
   CHI-SQUARE (CF TABLE)      118.59422
   DF=    8

   (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
   EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

   CORRELATION COEFFICIENT  0.2552
   MEAN( 2)=        2.27C67   SD( 2)=       1.42972
   MEAN( 5)=        2.07467   SD( 5)=       C.89534
```

Table 3-50. Use of TAB vs. Nature of Restrictions

```
    Q37    IS CROSS TABULATED WITH    Q43    OR,

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  5

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     3       5       1
     5       3       1


( 3)           (EXTREME RIGHT VALUE IS ROW TOTAL)
Q37
  5 *  27 57 23  107
  T*   5 11  4    20
  R*  25 53 21   100
  C*  12 24 35    20
  *
  4 *  15 29 11   55
  T*   3  6  2    10
  R*  27 53 20   100
  C*   7 12 17    10
  *
  3 *  29 43  9   80
  T*   5  9  2    15
  R*  35 54 11   100
  C*  13 19 14    15
  *
  2 *  41 55 11   107
  T*   8 10  2    20
  R*  38 51 10   100
  C*  18 27 17    20
  *
  1 * 113 51 12   176
  T*  22 10  2    34
  R*  64 29  7   100
  C*  50 22 18    34
  *
     **************
  ( 5)   1    3
```

(Question 37)

I.	(5)	Do not know of TAB
II.	(4)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

(Question 43)

I.	(1)	Proprietary
II.	(2)	Industrial Security
III.	(3)	Both (1) and (2)

```
Q43        ?

COLUMN 224   66
 TOTAL   235

PERCENT  43   13
 TOTAL   45

GRAND TOTAL=  525

CHI-SQUARE (OF TABLE)    60.57660
DF=   9

VALUES NOT ENTERED 975

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2529
MEAN( 5)=     0.59467  SD( 5)=    0.90494
MEAN( 3)=     2.27067  SD( 3)=    1.42972
```

Table 3-51. Use of TAB vs. Nature of Difficulties

```
  037    IS CROSS TABULATED WITH     Q46    OR₁

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    3        5        1
    2        3        1
```

```
( 3)               (EXTREME RIGHT VALUE IS ROW TOTAL)
037
  5 c    5 52 38    95
   T•    1  8  0    15
   R•    5 55 40   100
   C•   10 !e 15    15
    •
  4 •    5 57 18    60
   T•    1  6  3    10
   R•    8 62 30   100
   C•   1C 11  7    10
    •
  3 •    6 50 51   107
   T•    1  6  8    17
   R•    5 47 48   100
   C•   13 1% 21    17
    •
  2 •    9 78 44   131
   T•    1 12  7    21
   R•    7 6Ђ 3Ⴀ   150
   C•   19 23 1੪    21
    •
  1 •   23117 95   235
   T•    4 19 15    37
   R•   10 5C 40   100
   C•   48 35 39    37
    •
       *************
( 2)   1      3
```

(Question 37)
I.   (5) Do not know of TAB
II.   (4) Never
III. (3) About once every 6 months
IV.   (2) Once every 2 or 3 months
V.   (1) Every issue or almost every issue

(Question 43)
I.   Utility of Information
      (1) Attributable to inside of company
      (2) Attributable to outside of company
      (3) Attributable to both
II.   Timely Acquisition of Information
      (4) Attributable to inside of company
      (5) Attributable to outside of company
      (6) Attributable to both
III. Timely Awareness of Information
      (7) Attributable to inside of company
      (8) Attributable to outside of company
      (9) Attributable to both

```
Q46           2

COLUMN   48   246
  TOTAL      334

PERCENT   8   39
  TOTAL     53

GRAND TOTAL=   628

CHI-SQUARE (OF TABLE)        10.44790
DF=    8

VALUES NOT ENTERED 872

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0998
MEAN(  2)=       0.9693   SD( 2)=      1.20832
MEAN(  3)=       2.27067  SD( 3)=      1.42972
```

Table 3-52.   User's Highest Degree vs.   Use of TAB

```
    Q50A   IS CROSS TABULATED WITH     Q37    OR.

VARIABLE 11 IS CROSS TABULATED WITH VARIABLE 3

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   11      6       1
   3       5       1
```

```
(11)          (EXTREME RIGHT VALUE IS ROW TOTAL)
Q50A
  6 *  44 42 23 12 36   157
  F*   3  3  2  1  2    10
  R*  28 27 15  8 23   100
  C*   7 13 11 10  7    10
  *
  5 *   9 13  1     5    26
  T*   1  1  C     0     2              (Question 50A)
  R*  35 50  4    12   100              I.     (6)   None
  C*   1  4  0     1     2              II.    (1)   Associate's
  *                                     III.   (2)   Bachelor's
  4 *  77 67 46 34 72   296             IV.    (3)   Master's
  T*   5  4  3  2  5    20              V.     (4)   Professional
  R*  26 23 16 11 24   100              VI.    (5)   Doctor's
  C*  12 21 23 29 35    20
  *                                     (Question 37)
  3 *384157112 60 85   796             I.     (5)   Do not know of TAB
  T*  26 10  7  4  6    53              II.    (4)   Never
  R*  48 20 14  8 11   100              III.   (3)   About once every 6 months
  C*  59 48 55 51 41    53              IV.    (2)   Once every 2 or 3 months
  *                                     V.     (1)   Every issue or almost every issue
  2 *  20  2  3  2  1    28
  T*   1  0  0  0  0     2
  R*  71  7 11  7  4   100
  C*   3  1  1  2  0     2
  *
  1 * 115 44 18  9  9   195
  T*   8  3  1  1  1    13
```

```
  R*   59 23  9  5  5   100
  C*   18 14  9  8  4    13
  *
  ********(*************
  ( 3)    1    3    5
 Q37      2    4

COLUMN 649   203   206
 TOTAL      325   117

PERCENT  43    14    14
 TOTAL      22     8

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)      134.73241
 DF=   20

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2138
MEAN( 3)=     2.27067   SD( 3)=    1.42972
MEAN( 11)=    3.26733   SD( 11)=   1.29498
```

Table 3-53. Use of TAB vs. Kind of Work Position

```
   037    IS CROSS TABULATED WITH     C55    CR.

VARIABLE   2 IS CRCSS TABULATED WITH VARIABLE   7

NUMBER CF REPLICATIONS= 150C

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2      5       1
     7     12       1
```

```
( 2)                 (EXTREME RIGHT VALUE IS RCW TCTAL)
037
  5 *  12 17 24 26 28   5 2C   9   1   1   7   1   2C6
  T*   1   4   2   2   2   1   1   1   C   0   0   0    14
  R*   6  37 12 13 14   4 1C   4   C   C   3   0   100
  C*  2C 27 16 18 10   6 13   7   1   2 11   4    14
  *
  4 *   6 17 17 17 24   6 12   3   6   2   7   117
  T*   2   1   1   2   0   1   C   0   0   ½     8
  R*   5 14 15 13 21   5 1C   3   5   2   6   10C
  C*   9   7 11 12   9   4   8   2   9   5 11    8
  *
  3 ¼   7 36 18 37 42 15 14 13   7   6   6   2   203
  T*   C   2   1   2   3   1   1   1   C   0   0   0    14
  R*   3 18   5 18 21   7   7   6   3   3   3   1   10C
  C*  11 15 12 25 15 11   9 11 10 14 16   8    14
  *
  2 *  24 52 42 24 62 22 21 23   8   9 15   9   325
  T*   2   3   3   2   4   2   1   2   1   1   1   1    22
  R*   7 16 13   5 19 1C   6   7   2   3   5   3   10C
  C*  37 21 28 19 22 23 14 19 12 21 24 35    22
  *
  1 *  15 72 48 78126 77 84 75 47 24 28 14   648
  T*   1   5   3   3   8   5   6   5   3   2   2   1    43
  R*   2 11   7   6 19 12 13 17   7   4   4   2   100
  C*  23 30 32 26 45 55 56 61 68 57 44 54    43
  *
      ***************************************************
( 7)   1      3      5      7      9     11
```

(Question 37)
I	( )	Do not know of TAB
II.	(4)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

(Question 55)
I.	(02)	Research - basic
II.	(01)	Research - applied
III.	(11)	System analysis
IV.	(03)	Development - advanced
V.	(04)	Development - engineering
VI.	(05)	Development - operational system
VII.	(06)	R&D support
VIII.	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII.	(12)	Customer relations

```
  C55         2      4      6      8     10     12

COLUMN    65   140   282   151    69    63
  TOTAL     244   146   119   123    42    26

PERCENT    4    1C    19     13     5     4
  TOTAL     16    10     5      8     3     2

GRAND TCTAL= 1499

CHI-SQUARE (CF TABLE)     184.38603
DF=    44

VALUES NOT ENTERED    1
   CASE NO.     VARIABLE   2     VARIABLE   7
     340             1               0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -C.23C0
MEAN(  7)=     5.37667   SD(  7)=     2.76186
MEAN(  2)=     2.27067   SD(  2)=     1.42972
```

Table 3-54. Use of TAB vs. Field of Work Position

```
     037    IS CROSS TABULATED WITH     C56    OR.

 VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  8

 NUMBER OF APPLICATIONS  150C

 VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
            7      5      1
            8      5      1
```

```
 ( 2)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
 037
    5 *   2C    3    9 33 53 32 35 15   5  2G5
    Y*    1    C    1    2    4    2    2    1    0   14
    8 *  20    1    4 16 2E 1E 17    7    2  10C
    C*   13 1C 11 1C 13 2C 19 13 14       14
    .
    4 *   13    5    5 24 32 13 17    5    3  117
    Y*    1    C    C    2    2    1    1    C    0    8
    8 *   11    4    4 21 27 11 15    4    3  10C
    C*    8 17    6    7    4    8    5    4 11       8
    .
    3 *   17       11 55 56 14 31 1C    2  201
    Y*    1       1    4    4    1    2    1    0   13
    8 *    8       5 29 28    7 15    5    1  1CC
    C*   11       13 1F 14    5 17    4    7   13
    .
    2 *   36    3 15 75 81 32 48 25    6  325
    Y*    2    C    1    5    5    2    3    2    0   22
    8 *   11    1    6 23 25 1C 15    8    2  186
    C*   23 1C 23 22 2C 2C 26 22 22       22
    .
    1 *   73 15 40145178 67 58 59 11  648
    Y*    5    1    3 1C 12    4    4    4    1   45
    8 *   11    3    6 22 27 1C    9    9    2  1CC
    C*   46 63 43 41 44 42 3C 52 41       45
    .
    ................................................
    ( 8)    1    2    5    4    6

 075          2    4    6    8

 COLUMN 155    84  4CC  187   27
 TOTAL     3C  336  159  114

 PERCENT  11    6   27   13    2
 TOTAL     2   22   11    8

 GRAND TOTAL  1456

 CHI SQUARE (OF TABLE)        51.86257
 DF=     9

 VALUES NOT ENTERED    4
    CASE NO.      VARIABLE 7    VARIABLE 8
      12C               1             0
      12               1             0
      167               1             0
      53               5             0
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
 CORRELATION COEFFICIENT   0.0516
 MEANS  8)=      4.822CC   SD( 8)=    1.98451
 MEANS  2)=      2.270A7   SD( 2)=    1.42072
```

(Question 37)

I.	(5)	Do not know of TAB
II.	(4)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

(Question 56)

I. Production, Management, and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II. Medical Sciences
- (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV. Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided missiles
- (19) Navigation

V. Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI. Chemical Science and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (10) Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII. Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII. Research and Research Equipment
- (30) Research and research equipment

IX. Mathematics
- (15) Mathematics

Table 3-55. Use of TAB vs. User's Equivalent GS Rating

Q37   IS CROSS TABULATED WITH   Q58   OR,

VARIABLE 1 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     1   5   1
    11   15   1

(1)   (EXTREME RIGHT VALUE IS ROW TOTAL)
237
  5 •   2 17 21 39 55 34 21 9 6 1 1   206
  T•   0 1 1 3 4 2 1 1 0 0 0   14
  R•   1 8 10 19 27 17 10 4 3 0 0   100
  C•   7 7 7 15 19 18 30 18 24 13 20   14
    •
  4 •   12 21 24 27 19 6 5 2   1   117
  T•   1 1 2 2 1 0 0 0   0   3
  R•   10 18 21 23 16 5 4 2   1   100
  C•   5 7 8 9 10 9 10 8   20   8
    •
  3 •   1 23 31 36 56 33 9 11 2   1   203
  T•   0 2 2 2 4 2 1 1 0   0   14
  R•   0 11 15 18 28 16 4 5 1   0   100
  C•   4 9 11 13 19 18 13 22 8   10   14
    •
  2 •   4 44 65 65 56 50 15 16 7 3   325
  T•   0 3 4 4 4 3 1 1 0 0   22
  R•   1 14 20 20 17 15 5 5 2 1   100
  C•   14 17 22 23 19 27 21 33 28 38   22
    •
  1 •   21 62151122100 48 19 8 8 4 2 4   649
  T•   1 11 10 8 7 3 1 .1 1 0 0 0   43
  R•   3 25 23 19 15 7 3 1 1 1 0 1   100
  C•   75 63 52 43 34 26 27 16 32 50 40100   43
    •
    ••
(11)   2   4   6   8   10   12

(Question 37)
!   (5)   Do not know of TAB
II.   (4)   Never
III.   (3)   About once every 6 months
IV.   (2)   Once every 2 or 3 months
V.   (1)   Every issue or almost every issue

(Question 58)
I.   (01) GS-6 (under 6,000)
II.   (02) GS-9 (6,000 - 7,999)
III.   (03) GS-11 (8,000 - 10,249)
IV.   (04) GS-12 (10,250 - 11,999)
V.   (05) GS-13 (12,000 - 13,999)
VI.   (06) GS-14 (14,000 - 16,499)
VII.   (07) GS-15 .16,500 - 18,999)
VIII.   (08) GS-16 (19,000 - 20,999)
IX.   (09) GS-17 (21,000 - 23,999)
X.   (10) GS-18 (24,000 - 26,999)
XI.   (11) Sp A (27,000 - 29,999)
XII.   (12) Sp B (30,000 - 34,999)
XIII.   (13) Sp C (over 35,000)

Q58   3   5   7   9   11   13

COLUMN 28   289   294   70   25   5
TOTAL   250   286   184   49   8   4

PERCENT 2   19   20   5   2   0
TOTAL   17   19   12   3   1   0

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)   159.40614
DF=   44

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.2284
MEAN(11)=   5.27933   SD(11)=   1.98202
MEAN(1)=   2.27067   SD(1)=   1.42972

Table 3-56. Interviewer's Assessment of User's Information
Needs vs. Use of TAB

```
     Q59    IS CROSS TABULATED WITH    Q37    OR

VARIABLE 12 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    12       5       1
     3       5       1


 (12)                (EXTREME RIGHT VALUE IS ROW TOTAL)
 Q59
    3 • 129116 65 55117   482
    I•   9  8  4  7  8     32
    R•  27 24 13 11 24    100
    C•  20 36 32 47 57     32
    •
    2 • 322157116 54 79   728
    I•  21 10  8  4  5     49
    R•  44 22 16  7 11    100
```

(Question 59)
I.	(3)	Insignificant need
II.	(2)	Moderate need
III.	(1)	Large need

(Question 37)
I	(5)	Do not know of TAB
II.	(4)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

```
    C•  50 46 57 46 38     49
    •
    1 • 198 52 22  8 10   290
    I•  13  3  1  1  1     19
    R•  68 18  8  3  3    100
    C•  31 16 11  7  5     19
    •
    •••••••••••••••••••••••••
   ( 3)   1    3    5
   Q37       2    4

COLUMN 649  203  206
  TOTAL    325  117

PERCENT  43   14   14
  TOTAL      22    8

GRAND TOTAL= 1500

CHI-SQUARE (5F TABLE)      169.62781
DF=   8

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.3139
MEAN( 3)=        2.27067   SD( 3)=       1.42972
MEAN( 12)=       2.12800   SD( 12)=      0.70613
```

Table 3-57. Use of STAR vs. Use of DDC

```
   Q3P    IS CROSS TABULATED WITH      C39    QP,

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  4

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   3        5       1
   4        3       1


( 3)                   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q3R
   4  *    7 11 7F    54               (Question 39)
   T*     C  1  5     A                I.     (3)   Do not know of DDC
   R*     7 12 F1    100               II.    (2)   Know of DDC, but do not use it
   C*     1  3 11     F                II.    (5)   Use other sources instead
      *                                II.    (4)   Not relevant
   4  *   F 11 5?    7^                III.   (1)   Yes
   I*     C  1  3     5
   B*     5 1L 7F    130               (Question 38)
   C*     1  3  8     5                I      (5)   Do not know of STAR
      *                                II.    (4)   Never
   3  *   21 1? 74   112               III.   (3)   About once every 6 months
   T*     1  1  5     7                IV     (2)   Once every 2 or 3 months
   B*    15 15 FF    100               V      (1)   Every issue or almost every issue
   C*     4  5 11     7
      *
   2  *   54 F712R   269
   I*     4  F  9     1R
   B*    2C 32 48    100
   C*    11 2F 19     19
      *
   1  *  3R5223IF    555
   T*    2F 15 23     A4
   B*    4C 23 3F    100
   C*    R1 F4 F1     F4
      *
        ****************
  ( 4)    1        3
```

```
Q39          2

COLUMN 47?  F79
 TOTAL     74F

PERCENT  32    45
 TOTAL    23

GRAND TOTAL=  1500

CHI-SQUARE (OF TABLE)       157.29656
DF=      P

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.2939
MEAN( 4)=        2.13737   SD( 4)=      C.R65R2
MEAN( 3)=        1.71933   SD( 3)=      1.1765)
```

Table 3-58. Use of English Abstracts or Translations vs. Use
of STAR

```
Q44      IS CROSS TABULATED WITH      Q38      68,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE  2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     6      2      1
     2      5      1


( 6)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q44                                                         (Question 44)
  2 • 31 7 112 62 38 67  596                                I.    (2)  No
  T•  21  7  4  3  4   40                                    II.   (1)  Yes
  R•  53 19 10  6 11  100
  C•  33 42 55 54 71   40                                   (Question 38)
  •                                                         I.    (5)  Do not know of STAR
  1 • 638 157 50 32 27  904                                 II.   (4)  Never
  T•  43 10  3  2  2   60                                   III.  (3)  About once every 6 months
  R•  71 17  6  4  3  100                                   IV.   (2)  Once every 2 or 3 months
  C•  67 58 45 46 29   60                                   V.    (1)  Every issue or almost every issue
  •
      ••••••••••••••••••••••
( 2)   1   3   5
Q38    2   4

COLUMN 955  112   94
TOTAL  269   70

PERCENT  64   7   6
TOTAL   18    5

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)        74.12820
DF=   4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).




CORRELATION COEFFICIENT  0.2193
MEAN(  2)=      1.71933   SD(  2)=      1.17650
MEAN(  6)=      1.39733   SD(  6)=      0.48951
```

Table 3-59. Use of STAR vs. User's Highest Degree

```
    Q38     IS CROSS TABULATED WITH       Q50A     OR.

VARIABLE  3 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    3       5       1
    11      6       1


( 3)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q38
    5 *     3  1 48 25  1 12    94
    T*      0  0  3  2  0  1     6
    R*      3  1 51 31  1 13   10C
    C*      2  4  6 10  4  8     6

    4 *     7    35 15    13    70
    T*      0     2  1     1     5
    R*     10    50 21    19   100
    C*      4     4  5     8     5

    3 *     5  1 57 27  2 16   112
    T*      1  0  4  2  0  1     7
    R*      8  1 51 25  2 14   10C
    C*      5  4  7  9  8 10     7

    2 *    32  5127 67  9 29   269
    T*      2  0  8  4  1  2    18
    R*     12  7 47 25  3 11   10C
    C*     16 18 16 23 35 18    19

    1 *   144 2153115F 14 87   955
    T*     10  1 35 11  1  6    64
    R*     15  2 56 17  1  9   100
    C*     74 75 67 53 54 55    64

        *******************************
    (11)   1      3      5
```

(Question 38)

I.	(5)	Do not know of STAR
II.	(4)	Never
III.	(3)	About once every 6 months
IV.	(2)	Once every 2 or 3 months
V.	(1)	Every issue or almost every issue

(Question 50A)

I.	(6)	None
II.	(1)	Associate's
III.	(2)	Bachelor's
IV.	(3)	Master's
V.	(4)	Professional
VI.	(5)	Doctor's

```
Q50A        2    4    6

COLUMN 195  79F   26
 TOTAL      28   296  157

PERCENT  13   53    2
 TOTAL    2    20   10

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)      48.55758
DF=  20

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1250
MEAN( 11)=     1.26733   SD( 11)=   1.29498
MEAN(  3)=     1.71933   SD(  3)=   1.17650
```

Table 3-60. Use of STAR vs. Kind of Work Position

```
      038    IS CROSS TABULATED WITH     055    OR,

VARIABLE  3 IS CROSS TABULATEC WITH VARIABLE  7

NUMBER OF REPLICATICNS= 150C

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     3     5     1
     7    12     1
```

```
( 3)                  (EXTREME RIGHT VALUE IS RCW TOTAL)
038
   5 •    4 28 10 11 12  6 16  4        3   94
    T•    C  2  1  1  1  0  1  0        0    6
    R•    4 30 11 12 13  6 17  4        3  100
    C•    6 11  7  8  4  4 11  3        5    6
    •
   4 •    8 17  4 14 14  4  6  1  3  1  3  1  70
    T•    C  1  0  1  1  C  C  C  C  C  0  0   5
    R•    5 17  6 21 20  6  9  1  4  1  4  1 100
    C•    9  5  3 10  5  3  4  1  4  2  5  4   5
    •
   3 •    3 19 10 31 15  4  7 11        3  9  112
    T•    C  1  1  2  1  C  C  1        0  1    7
    R•    3 17  9 28 13  4  6 10        3  8  100
    C•    5  3  7 21  5  3  5  6        7 14    7
    •
   2 •   16 47 33 25 52 24 20 16  9 12 10  5  269
    T•    1  3  2  2  3  2  1  1  1  1  1  0  18
    R•    6 17 12  9 19  9  7  6  3  4  4  2 100
    C•   25 15 22 17 18 17 13 13 13 29 16 19  18
    •
   1 •   36 136 92 641 89 101 102 91 57 26 38 20  954
    T•    2  5  6  4 13  7  7  6  4  2  3  1  64
    R•    4 14 10  7 20 11 11 10  6  3  4  2 100
    C•   55 57 62 44 67 73 66 74 83 62 60 77  64
    •
   ••••••••••• •••••••••••••••••••••••••••••••••••••
 ( 7)    1     3     5     7     9    11
```

```
055         2     4     6     8    10    2

COLUMN   65   149   292   151   69   33
 TOTAL       244   146   139   123   42   26

PERCENT   4    10    19    10    5    4
 TOTAL    16    10     9    8     3    2

GRAND TOTAL =  1499

CHI-SQUARE (CF TABLE)        136.77541
DF=   44

VALUES NOT ENTERED    1
  CASE NO.    VARIABLE  3    VARIABLE  7
     34C           1               0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -C.1251
MEAN( 7)=       5.27667   SD( 7)=     2.76186
MEAN( 3)=       1.71933   SD( 3)=     1.17650
```

(Question 38)
I. (5) Do not know of STAR
II. (4) Never
III. (3) About once every 6 months
IV (2) Once every 2 or 3 months
V. (1) Every issue or almost every issue

(Question 55)
I. (02) Research - basic
II. (01) Research - applied
III. (11) System analysis
IV. (03) Development - advanced
V. (04) Development - engineering
VI. (05) Development - operational system
VII. (06) R&D support
VIII. (07) Test or evaluation
IX. (08) Production processes
X. (09) Production end-items
XI. (10) Reliability or quality control
XII. (12) Customer relations

Table 3-61. Use of STAR vs. Field of Work Position

Q38_ _ IS CRCSS TABULATED WITH   Q56   OP.

VARIABLE 3 IS CPCSS TABULATED WITH VARIABLE 8

NUMBER CF REPLICATIONS= 1*CC

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
`   5   1
P   5   1

(3)   (EXTREME RIGHT VALUE IS RCW TCTAL)
Q38
  5 • 1C   1   ? 22 16   P 19 1C   5   94
  T•   1   C   C 1 1   1   1 0   6
  P• 11   1   3 23 17   5 2   11   5   100
  C•   6   3   4 7 4   5 1:   9 19   6

  4 •   P   ?   3 11 2•   7 13   2   7C
  1•   1   C   C 1 2   6   1 C   5
  R•   11   3   4 1c 34 1C 15   3   100
  C•   6   7   4 3 6   4 7   2   5

  3 •   7   1   4 31 24 1C 26   5   2   113
  T•   C   0   0 2 2   1 2   C   0   7
  P•   6   1   4 28 22   9 24   5   2 100
  C•   4   ?   6 5 6   6 14   4   7   7

  2 • 37   1 16 65 57 29 38 15   3   269
  T•   2   C   1 5 4   2 3   1   0   18
  R•   14   C   6 26 21 11 14   7   1   100
  C•   2?   ? 19 21 14 18 20 17 11   18

  1 • 57 24 59203279135 91 79 17   953
  T•   6   2   4 14 15   7 6   5   1   64
  R•   1C   3   6 21 2? 11 1C   8   2   1CC
  C•   61 F7 65 60 70 6c 45 68 63   64

   •••••••••••••••••••••••••••••••••••••••
(8)   1   3   5   7   9

Q56 _ _   2   4   6   P

CCLUMN 159   94   4CC   187   27
TOTAL   ?6   336   159   114

PERCENT 11   4   27   13   7
TOTAL _ _ _ 2   ?2   11   8

GRANC TCTAL= 1456

CHI-SCUARE (FF TABLE)   68.7(726
DF=   ?2

VALUES NCT ENTERED   4
CASE NO.   VARIABLE 3   VARIABLE 8
  120   1   0
  122   ?   0
  157   ?   0
  516   1   0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT C.0403
MEAN(8)=   4.9920C   SD(8)=   1.98451
MEAN(3)=   1.71533   SD(3)=   1.17650

(Question 38)
I.   (5)   Do not know of STAR
II.   (4)   Never
III. (3)   About once every 6 months
IV.   (2)   Once every 2 or 3 months
V.   (1)   Every issue or almost every issue

(Question 56)
I   Production, Management and Social Sciences
      (32) Miscellaneous arts and sciences
      (23) Personnel and training
      (26) Production and management
      (28) Psychology and human engineering

II   Medical Sciences
      (16) Medical sciences

III   Mechanical, Industrial, Civil and Marine Engineering
      (11) Ground transportation equipment
      (13) Installations and constructions
      (18) Military sciences and operations
      (24) Photography and other reproduction processes
      (29) Quartermaster equipment and supplies
      (31) Ships and marine equipment
      (33) Transportation

IV.   Aeronautics and Space Technology
      (01) Aircraft and flight equipment
      (12) Guided missiles
      (19) Navigation

V   Electronics and Electrical Engineering
      (05) Communications
      (06) Detection
      (07) Electrical equipment
      (08) Electronics, electronic equipment

VI   Chemical Science and Materials
      (03) Chemical warfare equipment and materials
      (04) Chemistry
      (10) Fuels and combustion
      (14) Materials (nonmetallic)
      (17) Metallurgy
      (22) Ordnance

VII. Physical Science
      (02) Astronomy, geophysics and geography
      (09) Fluid mechanics
      (20) Nuclear physics and nuclear chemistry
      (21) Nuclear propulsion
      (25) Physics
      (27) Propulsion systems

VIII Research and Research Equipment
      (30) Research and research equipment

IX.   Mathematics
      (15) Mathematics

Table 3-62. Use of DOD Specialized Information Centers vs.
Use of DDC

```
    C40     IS CROSS TABULATED WITH      Q39      OR.

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  4

NUMBER CF REPLICATIONS= 15CC

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     5        3        1
     4        3        1


 ( 5)                   (EXTREME RIGHT VALUE IS ROW TCTAL)
Q40
    3 • 133113415    661
    T•   9  8 28     44
    P•  2C 13 53    100
    C•  28 32 61     44
    •
    2 • 53 74113    290
    T•   6  6  8     19
    P•  32 25 35    100
    C•  2C 24 17     19
    •
    1 • 2471•1151    545
    T•  16 1C 15     37
    R•  45 28 28    1CO
    C•  52 43 72     37
    •
      ********************
   ( 4)    1      3
Q39           2

CCLUMN 473    675
  TOTAL   348

PERCENT  32    48
  TOTAL   23

GRAND TCTAL=  1500
```

(Question 40)
I.   (29)   Do not know of such centers
II. (31)   Use other sources instead
II. (30)   Not relevant
III. (1-28)   Use centers

(Question 39)
I.   (3)   Do not know of DDC
II. (2)   Know of DDC, but do not use it
II. (5)   Use other sources instead
II. (4)   Not relevant
III. (1)   Yes

```
CHI-SQUARE (CF TABLE)       163.62961
DF=   4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SCME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.3121
MEAN(  4)=        2.13733   SD(  4)=      C.86582
MEAN(  5)=        2.C7462   SD(  5)=      C.89534
```

Table 3-63. Use of DDC vs. Nature of Restrictions

Q39   IS CROSS TABULATED WITH   Q43   CR.

VARIABLE 4 IS CROSS TABULATED WITH VARIABLE 5

NUMBER OF REPLICATIONS= 150C

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
        4   3   1
        5   3   1

```
( 4)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q39
    3 *  101 166  54   321
    T*    19  32  10    61
    R*    31  52  17   100
    C*    45  71  82    61
    *
    2 *   41  41   6    88
    T*     8   8   1    17
    R*    47  47   7   100
    C*    18  17   9    17
    *
    1 *   82  28   6   116
    T*    16   5   1    22
    R*    71  24   5   100
    C*    37  12   9    22
    *
    ************************
   ( 5)    1       3
Q43          2

COLUMN 224      66
TOTAL     235

PERCENT  43     13
TOTAL      45

GRAND TOTAL=    525
```

(Question 39)
I.   (3)   Do not know of DDC
I'.   (2)   Know of DDC, but do not use it
II.   (5)   Use other sources instead
II   (4)   Not relevant
III.   (1)   Yes

(Question 43)
I.   (1)   Proprietary
II   (2)   Industrial Security
III   (3)   Both (1) and (2)

CHI-SQUARE (OF TABLE)   57.64601
DF=   4

VALUES NOT ENTERED 975

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.2695
MEAN(5)=   6.59467   SD(5)=   0.90494
MEAN(4)=   2.13733   SD(4)=   0.86582

Table 3-64. Use of DDC vs. Nature of Difficulties

```
____ Q39 ___ IS CROSS TABULATED WITH ___ Q46 ___ OR,_____

VARIABLE  4 IS CROSS TABULATED WITH VARIABLE  2 _____

NUMBER OF REPLICATIONS= 1500 _____

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED) _____
      4       3       1
      2       3       1
```

```
( 4)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q39
    3 *  19 18 11 34   334
    T*     3  29 21     53
    R*     6  54 40    100
    C*    40  54 54     53
    *
    2 *  14 69 50   133
    T*    2 11  8     21
    R*   11 52 38   100
    C*   29 21 20     21
    *
    1 *  15 84 62   161
    T*    2 13 10     26
    R*    9 52 39   100
    C*   31 2* 25     26
    *
         **************
    ( 2)    1    3
    Q46         2

COLUMN   48   246
 TOTAL        334

PERCENT   8    39
 TOTAL        53

GRAND TOTAL=   628
```

(Question 39)
I.   (3)   Do not know of DDC
II.   (2)   Know of DDC, but do not use it
II.   (5)   Use other sources instead
II.   (4)   Not relevant
III.   (1)   Yes

(Question 46)
I.   Utility of Information
     (1)   Attributable to inside of company
     (2)   Attributable to outside of company
     (3)   Attributable to both
II.   Timely Acquisition of Information
     (4)   Attributable to inside of company
     (5)   Attributable to outside of company
     (6)   Attributable to both
III.   Timely Awareness of Information
     (7)   Attributable to inside of company
     (8)   Attributable to outside of company
     (9)   Attributable to both

```
CHI-SQUARE (OF TABLE)        4.02221
DF=   4

VALUES NOT ENTERED  872

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1367
MEAN(  2)=    0.96933   SD(  2)=    1.20832
MEAN(  4)=    2.13733   SD(  4)=    0.86582
```

Table 3-65.   Use of DDC vs. User's Highest Degree

```
      035     IS CROSS TABULATED WITH      Q504    ON.

VARIABLE  4 IS CROSS TABULATED WITH VARIABLE 11

NUMBER CF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     4       3        1
    11        6        1


( 4)                     (EXTREME RIGHT VALUE IS ROW TOTAL)
034
     3 *   56  7309202 15 50  679
    T*    4   F 21 13  1  6   45
    R*    8  1 46 30   2 13  1CC
    C4   23 25 39 68 59 57   45
     *
    Z *  42  3204 58  6 35  348
    T*    3  C 14  4   0  2   23
    R*   12  1 59 17   2 15  10C
    C*   22 11 26 20 23 22   23
     *
    1 *  57 18285 24  5 32  473
    T*    6  1 19  2   0  2   32
    R*   21  4 60  8   1  7  1CO
    C*   52 64 36 12 19 20   32
     *
    -  **********************
   (11)    1    3    5
   050R     2    4    6

   CCLUMN 195   79A   26
     TOTAL   28  296  157

   PERCENT 13   53    2
   TOTAL    2    20   1C

   GRAND TOTAL= 1500
```

(Quest on 39)
I.   (3)   Do not know of DDC
II   (2)   Know of DDC, but do not use it
II.   (5)   Use other sources instead
II   (4)   Not relevant
III. (1)   Yes

(Question 50A)
I.   (6)   None
II.   (1)   Associate's
III. (2)   Bachelor's
IV.   (3)   Master's
V.   (4)   Professional
VI   (5)   Doctor's

```
CHI-SQUARE (OF TABLE)      145.20839
DF=   10

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE A VF TABLE).

CORRELATION COEFFICIENT  0.23/8
MEAN( 11)=        3.26733   S( ( 11)    1.29498
MEAN( 4)=         2.13733   SD( 4       0.86582
```

Table 3-66.   Type of Work Activity vs. Use of DDC

```
   Q54    IS CROSS TABULATED WITH    Q39   00.

VARIABLE  8 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     8       5       1
     3       3       1


( 8)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q54
     5 =  70 71154    295              (Question 54)
     T=   5  5 :0     20          I.   (5)  Technical evaluation
     R=  24 24 52    100          II.  (4)  Scientific and Engineering (nonmanagement)
     C=  15 20 23     20          III. (2)  Technical management
      .                           IV.  (1)  Administrative management
     4 =  15  5  8     28          V.   (3)  Both administrative and technical management
     T=   1  0  1      2
     R=  54 18 29    100              (Question 39)
     C=   3  1  1      2          I.   (3)  Do not know of DDC
      .                           II.  (2)  Know of DDC, but do not use it
     3 =  40 39 92    171          II.  (5)  Use other sources instead
     T=   3  3  6     11          II.  (4)  Not relevant
     R=  23 23 54    100          III. (1)  Yes
     C=   8 11 14     11
      .
     2 = 263165362    823
     T=  18 13 24     55
     R=  32 24 44    100
     C=  86 57 54     55
      .
     1 =  85 38 59    182
     T=   6  3  4     12
     R=  47 21 32    100
     C=  16 11  9     12
      .
         ••••••••••••••••••
   ( 3)   1    3


Q39       2

COLUMN 473  679
  TOTAL    347

PERCENT  32   45
  TOTAL    23

GRAND TOTAL= 1499

CHI-SQUARE (OF TABLE)       42.19438
DF=   8

VALUES NOT ENTERED   1
  CASE NO.     VARIABLE  8    VARIABLE  3
   1044          0             2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1114
MEAN( 3)=      2.13733   SD( 3)=      0.66582
MEAN( 8)=      2.61867   SD( 8)=      1.30424
```

Table 3-67.　Use of DDC vs. Kind of Work Position

```
_____C39_ _ IS_CROSS TABULATED W./H      Q55     OR,     __ __  ___ ___ ___

VARIABLE  4 IS CROSS TABULATED WITH VARIABLE _7_ _____

NUMBER CF REPLICATIONS= 1500                     __  _   _ ___ __ _ ___

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)                       __ _>  _ ___
    4      3     1
    7     12     1  _____

---- ---- -                                  _  _  _ _ _____ _
( 4)            (EXTREME RIGHT VALUE IS FOM TCTAL)
Q39                                                    (Question 39)
 3 *  36169 83 92114 52 56 26 1C 10 27  8  679          I   (3)  Do not know of DDC
 T*   2 11  6  6  8  3  4  2  1  1  2  1   45          II   (2)  Know of DDC, but do not use it
 R*   5 24 12 14 17  8  8  4  1  1  '  1  1C0          II   (5)  Use other sources instead
 C*  55 6F 56 c3 40 37 37 21 14 24 43 31   45          II   (4)  Not relevant
 *                                                    III   (1)  Yes
 2 *  19 4C 4F 31 78 31 32 31 17  9 13  7  348
 T*   1  3  '  2  4  2  2  2  1  1  1  0   23          (Question 55)
 R*   5 11 1; 9 22  9  9  5  5  3  4  2  100           I    (32) Research - basic
 C*  25 16 27 21 28 22 21 25 25 21 21 27   23          II   (01) Research - applied
 *                                                    III   (11) System analysis
 1 *  1C 35 26 23 90 56 63 66 42 23 23 61  472         IV   (03) Development - advanced
 T*   1  2  2  2  6  4  4  A  3  2  2  '    31          V   (04) Development - engineering
 R*   2  8  6  9 19 12 13 14  9  5  5  <   100          VI   (05) Development - operational system
 C*  15 16 17 16 32 4C 42 54 61 55 37 42   31          VII  (06) R&D support
 *                                                    VIII  (07) Test or evaluation
************************************************       IX   (08) Production processes
( 7)   1    3    5    7    9   11                      X    (09) Production end-items
Q55        2    4    6    8   10   12                  XI   (10) Reliability or quality control
                                                      XII   (12) Customer relations
COLUMN  65   149   282   151    59   63
TCTAL   244   1-6   139   123   42   26    .

PERCENT  4   1C   15   1C?   5    4
TOTAL   16   10    9    8    3    2

GRAND TCTAL= 1495
_____ ___ ___ _   ~
___ ____ _____ __ __  ____ __ ___ ___

___ _____ ___ ___ __ _ ___  ___ __

CHI-SQUARE (CF TABLE)     193.93376     _  _  _ ... _     __ __ ___ _
DF=  22

VALUES NOT ENTERED   1      __ __ _ _ __ __   _____ __
 CASE NO.    VARIABLE 4    VARIABLE 7
   34C          1              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -C..915
MEAN( 7)=       5.27667   SC( 7)=     2.76186
MEAN( 4)=       2.11733   SC( 4)=     C.86582
```

Table 3-68. Use of DDC vs. Field of Work Position

```
    035   IS CROSS TABULATED WITH      056    OR,

  VARIABLE   4 IS CRCSS TABULATED WITH VARIABLE  8

  NUMBER CF RFPLICATICNS= 1500

  VARIABLE MAXIPLM MINIMUM  (AS SPECIFIED)
      4         3        1
      8         5        1


    ( 4)             (EXTREME RIGHT VALUE IS RCW TCTAL)
    039
      3 *  62   7 38144178 R21C5 4C 21   677
      Y*   4   C   3 10 12   5   7   3  1    45
      P*   9   1   6 21 26 12 16   6   3   100
      C*  39 23 45 43 44 52 56 35 18    45
      *
      2 *  38 1C 15 97 90 28 43 30   1   347
      Y*   3   1   1   6   6  2   3  2   0   23
      R*  11   3   4 27 26   8 22   9  0   100
      C*  24 33 18 27 22 18 23 26   4    23
      *
      1 *  55 13 31100132 49 35 44   5   472
      Y*   4   1   2   7   9  3   3  3   0    32
      R*  13   3   7 21 28 1C   8   9  3   100
      C*  37 43 37 30 33 31 21 39 14    32
      *
      *****************************************
    ( B)    1       3      5      7      9
    056           2      4      6      8

  COLUMN 159    84    400    187   27
  TOTAL      3C    336   159   114

  PERCENT  11      6    27    13      2
  TOTAL        2     22    11     8

  GRAND TCTAL=  1496




  CHI-SQUARE (CF TABLE)        46.62127
  DF=   16

  VALUES NOT ENTERED    4
  CASE   No.    VARIABLE  4      VARIABLE  8
    12'           1               0
    122           3               0
    197           2               0
    538           3               0

  (THE FOLLOWING COMPUTATICNS ARE BASED ON ALL DATA AS ENTERED
   EVEN IF SCME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT  0.0764
  MEAN(  8)=       4.9220C   SD(  8)=      1.98451
  MEAN(  4)=       2.13733   SD(  4)=      C.86582
```

(Question 39)
I.　(3)　Do not know of DDC
II.　(2)　Know of DDC, but do not use it
II.　(5)　Use other sources instead
II.　(4)　Not relevant
III.　(1)　Yes

(Question 56)
I.　Production, Management and Social Sciences
　　(32)　Miscellaneous arts and sciences
　　(23)　Personnel and training
　　(26)　Production and management
　　(28)　Psychology and human engineering

II.　Medical Sciences
　　(16)　Medical sciences

III.　Mechanical, Industrial, Civil and Marine Engineering
　　(11)　Ground transportation equipment
　　(13)　Installations and constructions
　　(18)　Military sciences and operations
　　(24)　Photography and other reproduction processes
　　(29)　Quartermaster equipment and supplies
　　(31)　Ships and marine equipment
　　(33)　Transportation

IV.　Aeronautics and Space Technology
　　(01)　Ground transportation equipment
　　(12)　Guided missiles
　　(19)　Navigation

V.　Electronics and Electrical Engineering
　　(05)　Communications
　　(06)　Detection
　　(07)　Electrical equipment
　　(08)　Electronics, electronic equipment

VI.　Chemical Science and Materials
　　(03)　Chemical warfare equipment and materials
　　(04)　Chemistry
　　(10)　Fuels and combustion
　　(14)　Materials (nonmetallic)
　　(17)　Metallurgy
　　(22)　Ordnance

VII.　Physical Science
　　(02)　Astronomy, geophysics and geography
　　(09)　Fluid mechanics
　　(20)　Nuclear physics and nuclear chemistry
　　(21)　Nuclear propulsion
　　(25)　Physics
　　(27)　Propulsion systems

VIII.　Research and Research Equipment
　　(30)　Research and research equipment

IX.　Mathematics
　　(15)　Mathematics

Table 3-69.   User's Equivalent GS Rating vs. Use of DDC

```
    Q68     IS CROSS TABULATED WITH       Q39      OR,

VARIABLE 11 IS CROSS TABULATED WITH VARIABLE  9

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    11        15        1
     3         3        1


(11)
Q58                    (EXTREME RIGHT VALUE IS ROW TOTAL)        (Question 58)
   13 •    3  1        4                                  I.     (01)  GS-6 (under 6,000)
    T•    0  0        0                                   II.    (02)  GS-9 (6,000 - 7,999)
    R•   75 25      100                                   III.   (03)  GS-11 (8,000 - 10,249)
    C•    1  0        0                                   IV.    (04)  GS-12 (10,250 - 11,999)
     •                                                    V.     (05   GS-13 (12,000 - 13,999)
   12 •    1  1  3     5                                  VI.    (06)  GS-14 (14,000 - 16,499)
    T•    0  0  0     0                                   VII.   (07)  GS-15 (16,500 - 18,999)
    R•   20 20 60   100                                   VIII.  (08)  GS-16 (19,000 - 20,999)
    C•    0  0  0     0                                   IX.    (09)  GS-17 (21,000 - 23,999)
     •                                                    X      (10)  GS-18 (24,000 - 26,999)
   11 •    1  4  3     8                                  XI     (11)  Sp A (27,000 - 29,999)
    T•    0  0  0     1                                   XII.   (12)  Sp B (30,000 - 34,999)
    R•   13 50 38   100                                   XIII.  (13)  Sp C (over 35,000)
    C•    0  1  0     1
     •                                                    (Question 39)
   10 •    3  7 15    25                                  I.     (3)   Do not know of DDC
    T•    0  0  1     2                                   II.    (2)   Know of DDC, but do not use it
    R•   12 28 60   100                                   II.    (5)   Use other sources instead
    C•    1  2  2     2                                   II.    (4)   Not relevant
     •                                                    III.   (1)   Yes
    9 •    6  9 34    49
    T•    0  1  2     3
    R•   12 18 69   100
    C•    1  3  5     3
     •
    8 •   10 12 48    70
    T•    1  1  3     5




    R•   14 17 69   100       GRAND TOTAL=  1500
    C•    2  3  7     5
     •                        CHI-SQUARE (OF TABLE)        202.70226
    7 •   26 35123   184      DF=   22
    T•    2  2  8    12
    R•   14 19 67   100       (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
    C•    5 10 18    12       EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

    6 •   70 59165   294      CORRELATION COEFFICIENT  0.3006
    T•    5  4 11    20       MEAN( 3)=        2.13733    SC( 3)=        0.86582
    R•   24 20 56   100       MEAN( 11)=       5.27933    SD( 11)=       1.88282
    C•   15 17 24    20

    5 •   85 74127   286
    T•    6  5  8    19
    R•   30 26 44   100
    C•   18 21 19    19

    4 •  107 88 94   289
    T•    7  6  6    19
    R•   37 30 33   100
    C•   23 25 14    19

    3 •  143 52 63   258
    T•   10  3  4    17
    R•   55 20 24   100
    C•   30 15  9    17

    2 •   18  6  4    28
    T•    1  0  0     2
    R•   64 21 14   100
    C•    4  2  1     2
     •
        ••••••••••••••••
   (11)    1  2  3
Q39           2

COLUMN 473   679
TOTAL    348

PERCENT  32   45
TOTAL    23
```

Table 3-70. Interviewer's Assessment of User s Information
Needs vs. Use of DDC

```
      Q59    IS CROSS TABULATED WITH    Q39    °R,

VARIABLE 10 IS CRCSS TABULATED WITH VARIABLE  4

NUMBER CF REPLICATIONS= 150C

VARIABLE MAXIMUM MINIMUN  (AS SPECIFIED)
    10      3      1
     4      3      1


 (10)                 (EXTREME RIGHT VALUE IS RCW TCTAL)
 Q59
   3 *  88 86°C8   482                    (Question 59)
  T*    6   6 21    32                    I.    (3)   Insignificant need
  R*   1F 18 64   100                     II.   (2)   Moderate need
  C*   19 25 45    32                     III.  (1)   Large need
   *
   2 * 221176328  728                     (Question 39)
  T*   15 12 22    4S                     I.    (3)   Do not know of DDC
  R*   3C 25 45   100                     II.   (2)   Know of DDC, but do not use it
  C*   47 *1 48    4S                     II.   (5)   Use other sources instead
   *                                      II.   (4)   Not relevant
   1 *  164 83 43  290                    III.  (1)   Yes
  T*    11   7  3   14
  R*   57 25 15   1C0
  C*   35 24  6    19
   *
      *************
  ( 4)    1    3
  Q39         2

COLUMN 473  679
TOTAL     347

PERCENT  32   49
TOTAL    23

GRAND TCTAL=  150C




CHI-SQUARE (CF TABLE)      191.4C241
DF=    4

(THE FCLLCWING CCMPUTATICNS ARE PASED ON ALL DATA AS ENTERED
EVEN IF SCME ARE EXCLUDED FRCM THE ABOVE TABLE).

CORRELATICN CCEFFICIENT   C.3433
MEAN(  4)=     2.13733   SC(  4)=     C.86582
MEAN( 10)=     2.12800   SC( 10)=     0.70613
```

Table 3-71. Use of Other Specialized Information Centers vs.
Use of DOD Specialized Information Centers

```
    Q41    IS CROSS TABULATED WITH    Q40    OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  4

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      5        2        1
      4        3        1


( 5)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q41                                                (Question 41)
    2 •  119 82252   453                           I.    (2)   No
    T•    8   5  17    30                           II.   (1)   Yes
    R•   26  18  56   100
    C•   22  28  38    30                           (Question 40)
    •                                               I.    (29)  Do not know of such centers
    1 •  430208409  1047                            II    (31)  Use other sources instead
    T•   29  14  27    70                           II.   (30)  Not relevant
    R•   41  20  39   100                           III.  (1-28) Use centers
    C•   78  72  62    70
    •
    •••••••••••••••••
   ( 4)   1    3
  Q40          2

COLUMN 549   661
 TOTAL    290

PERCENT 37    44
 TOTAL    19

GRAND TOTAL= 1500

CHI-SQUARE (OF TABLE)       39.12311
DF=   2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).




CORRELATION COEFFICIENT  0.1609
MEAN(  4)=      2.07467   SD(  4)=      0.89534
MEAN(  5)=      1.30200   SD(  5)=      0.45928
```

Table 3-72.   Use of DOD Specialized Information Centers vs. User's Highest Degree

```
___   Q40    IS CROSS TABULATED WITH     Q50A    OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     5        3       1
    11        6       1


( 5)             (EXTREME RIGHT VALUE IS ROW TOTAL)
Q40                                                    (Question 40)
    3 *   70 10351148 15 67   661                       I.    (29)  Do not know of such centers
    T*     5  1 23 10  1  4    44                        II.   (31)  Use other sources instead
    R*    11  2 53 22  2 1C   10C                        II.   (30)  Not relevant
    C*    36 36 44 50 58 43    44                        III.  (1-28) Use centers
     *
    2 *   30 (145 54  4 49   290                        (Question 50A)
    T*     2  1 10  4  0  3    19                        I.    (6)   None
    R*    10  3 50 19  1 17   100                        II.   (1)   Associate's
    C*    15 25 18 18 15 31    15                        III.  (2)   Bachelor's
     *                                                   IV.   (3)   Master's
    1 *   95 10302 94  7 41   549                        V.    (4)   Professional
    T*     6  1 20  6  0  3    37                        VI.   (5)   Doctor's
    R*    17  2 55 17  1  7   100
    C*    49 36 38 32 27 25    37
     *
         ***********************************
   (11)   1 _ 3    5
   Q50A    _ 2   4   6

   COLUMN 195   798   26
   TOTAL      28   296   157

   PERCENT 13   53   2
   TOTAL      2   20   10

   GRAND TOTAL= 1500




CHI-SQUARE (OF TABLE)      37.58611
DF=   10

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0947
MEAN( 11)=       3.26733   SD( 11)=       1.29498
MEAN(  5)=       2.07467   SD(  5)=       0.89534
```

Table 3-73. Type of Work Activity vs. Use of DOD Specialized Information Centers

```
    Q54    IS CROSS TABULATED WITH      Q40    QR,

  VARIABLE  8 IS CROSS TABULATED WITH VARIABLE  6

  NUMBER OF REPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      8       5       1
      6       3       1


  ( 8)                (EXTREME RIGHT VALUE IS ROW TOTAL)
  Q54
    5 •  80 61154  295
    T•   5  4 10   20
    R•  27 21 52  100
    C•  15 21 23   20
    •
    4 •  13  9  6   28
    T•   1  1  0    2
    R•  46 32 21  100
    C•   2  3  1    2
    •
    3 •  44 37 90  171
    T•   3  2  6   11
    R•  26 22 53  100
    C•   8 13 14   11
    •
    2 • 328153342  823
    T•  22 18 73   55
    R•  40 19 42  100
    C•  80 53 52   55
    •
    1 •  84 30 68  182
    T•   6  2  5   12
    R•  46 16 37  100
    C•  15 10 10   12
    •
       ••••••••••••••••••
  ( 6)   1    2
```

(Question 54)
I   (5)   Technical evaluation
II. (4)   Scientific and Engineering (nonmanagement)
III (2)   Technical management
IV   (1)   Administrative management
V.   (3)   Both administrative and technical management

(Question 40)
I.   (29)   Do not know of such centers
II. (31)   Use other sources instead
II. (30)   Not relevant
III (1-28) Use centers

```
  Q40           2

  COLUMN 549   660
  TOTAL    290

  PERCENT  37    44
  TOTAL      19

  GRAND TOTAL= 1459

  CHI-SQUARE (OF TABLE)       38.10905
  DF=    8

  VALUES NOT ENTERED   1
    CASE NO.      VARIABLE  8     VARIABLE  6
     1044             C               3

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT  0.1135
  MEAN(  6)=        2.07467   SD(  6)=       0.89534
  MEAN(  8)=        2.51867   SD(  8)=       1.30424
```

Table 3-74. Use of DOD Specialized Information Centers vs. Kind of Work Position

```
    040     IS CROSS TABULATED WITH        Q55      OR,

VARIABLE   5 IS CROSS TABULATED WITH VARIABLE  7

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        5      3        1
        7     12        1
```

```
  ( 5)              (EXTREME RIGHT VALUE IS ROW TOTAL)
  040
    3 *  21136 61 75135 48 54 42 26 13 41      661
    T*    1  9  4  5  9  3  4  3  2  1  3       44
    P*    3 21  9 11 20  7  8  6  4  2  6  1   100
    C*   32 56 41 51 48 35 36 34 38 31 65 55   44

    2 *  25 43 30 26 48 28 39 26    15  9     290
    T*    2  3  2  2  3  2  2  2  0  1  1       19
    P*    5 15 10  5 17 10 10  9  2  5  3  2   100
    C*   38 18 20 18 17 20 19 21  9 36 14 19    19

    1 *  15 65 58 45 99 63 68 55 37 14 13 12   548
    T*    1  4  4  3  7  4  5  4  2  1  1       37
    P*    3 12 11  8 18 11 12 10  7  3  2      100
    C*   29 27 39 31 35 45 45 45 54 33 21  6    37

         ***************************************
    ( 7)   1     3     5     7     9    11
    Q55       2     4     6     8    10    12

COLUMN   66  149  242  151   69   63
TOTAL   244  146  146  135  123   42   25

PERCENT   4   10   16   10    5    4
TOTAL    16   10   10    9    8    3

GRAND TOTAL= 1455
```

(Question 40)
- I.   (29) Do not know of such centers
- II.   (31) Use other sources instead
- II.   (30) Not relevant
- III. (1-28) Use centers

(Question 55)
- I.   (02) Research - basic
- II.   (01) Research - applied
- III. (11) System analysis
- IV.   (03) Development - advanced
- V.   (04) Development - engineering
- VI.   (05) Development - operational system
- VII. (06) R&D support
- VIII. (07) Test or evaluation
- IX.   (08) Production processes
- X.   (09) Production end-items
- XI.   (10) Reliability or quality control
- XII. (12) Customer relations

```
CHI-SQUARE (OF TABLE)        82.28767
DF=   22

VALUES NOT ENTERED    1
    CASE NO.     VARIABLE  5     VARIABLE  7
       340            1              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0720
MEAN( 7)=      5.27662    SD( 7)=     3.76186
MEAN( 5)=      2.27462    SD( 5)=     0.89534
```

Table 3-75. Use of DOD Specialized Information Centers vs. Field of Work Position

```
   04C    IS CROSS TABULATED WITH    C56    OR,

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE  A

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       5      5       1
       A      5       1


( 5)                (EXTREME RIGHT VALUE IS ROW TOTAL)
040
   5 *  44  7 39151179 7810C 29 12  65)
     1*   4  C  3 10 12  5  7  2  1  44
     P*  10  1  6 23 27 12 15  4  2 1C)
     C*  4C 23 4C 55 45 46 43 25 44    44

   2 *  4C 14 18 54 65 3C 31 29  8 2+9
     1*   3  1  1  4  2  7  2  1  19
     8*  14  5  6 19 23 1C 11 1C  3 1uC
     C*  25 47 21 16 16 19 17 25 10   19

   1 *  55  5 27131155 51 56 57  7 548
     1*   4  1  3  9 10  3  4  4  0  37
     8*  1C  2  5 24 28  9 10 10  3 1C)
     C*  35 3C 32 39 39 32 30 5C 26  )7

      *6+6+6++++++++++++++++++++6+++++6+++
  ( 8)    1    3    5    7    9
056           2    4    6    8

CCLUMN 185   84   400   187   27
TOTAL    3C   336  159   114

PERCENT 11    6   27   13    2
TOTAL    2   22   11    8

GRAND TCTAL= 1456
```

```
CHI-SQUARE (CF TABLE)      5C.83437
DF=  18

VALUES NOT ENTERED   4
  CASE NO.     VARIABLE  5     VARIABLE  A
    120           1             C
    122           3             C
    167           2             C
    538           3             C

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =C.CO3C
MEAN( 8)=      4.8220C   SD( 8)=   1.98451
MEAN( 5)=      2.07467   SD( 5)=   C.89534
```

(Question 40)
I.   (29)   Do not know of such centers
II.   (31)   Use other sources instead
II.   (30)   No relevant
III.   (1-28)   Use centers

(Question 56)
I.   Production, Management and Social Sciences
    (32)   Miscellaneous arts and sciences
    (23)   Personnel and training
    (20)   Production and management
    (28)   Psychology and human engineering

II.   Medical Sciences
    (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
    (11)   Ground transportation equipment
    (13)   Installations and constructions
    (18)   Military sciences and operations
    (24)   Photography and other reproduction processes
    (29)   Quartermaster equipment and supplies
    (31)   Ships and marine equipment
    (33)   Transportation

IV.   Aeronautics and Space Technology
    (01)   Aircraft and flight equipment
    (12)   Guided missiles
    (19)   Navigation

V.   Electronics and Electrical Engineering
    (05)   Communications
    (06)   Detection
    (07)   Electrical equipment
    (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
    (03)   Chemical warfare equipment and materials
    (04)   Chemistry
    (10)   Fuels and combustion
    (14)   Materials (nonmetallic)
    (17)   Metallurgy
    (22)   Ordnance

VII.   Physical Science
    (02)   Astronomy, geophysics and geography
    (09)   Fluid mechanics
    (20)   Nuclear physics and nuclear chemistry
    (21)   Nuclear propulsion
    (25)   Physics
    (27)   Propulsion systems

VIII.   Research and Research Equipment
    (30)   Research and research equipment

IX.   Mathematics
    (15)   Mathematics

Table 3-76. Use of DOD Specialized Information Centers vs. User's Equivalent GS Rating

```
04C     IS CROSS TABULATED WITH      Q5R      (R)

VARIABLE  5 IS CROSS TABULATED WITH VARIABLE   9

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        5      9       5
        9      13      1
```

```
( 5)              (EXTREME RIGHT VALUE IS ROW TOTAL)
04C
  1 *   4 77 119 123 155  52 41 31 11  4  2  1  351
  T*    C  5  8  8 10   6  3  2  1  C  0  0   44
  R*    1 12 18 19 23 14  6  5  2  1  C  C  100
  C*   18 10 41 43 53 5C 59 63 44 50 40 25   54

  2 *   3 36 57 59 54 39 15 13  4  2  3  2  290
  T*    C  3  4  4  3  1  1  0  C  0  0   10
  R*    1  1 20 20 19 13  5  4  1  1  1  1  100
  C*   11 15 2C 21 18 21 21 27 16 25 60 50   10

  1 *  20 142 113 104 85 53 14  5 10  2     1  549
  T*    1  9  8  7  6  4  1  C  1  0     0   37
  R*    4 26 21 19 15 10  3  1  2  0     0  100
  C*   71 55 39 36 29 29 2C 10 40 25    25   47

  ***************************************
  ( 9)   2     4     6     8    10    12
  Q5R       3     5     7     9    11    13

COLUMN  28  298  294   7C   25    5
TOTAL      255  286  184   49    8    4

PERCENT  2   19   2C    5    2    0
TOTAL      17   19   12    3    1    0

GRAND TOTAL = 1500
```

(Question 40)
I.   (29)   Do not know of such centers
II.   (31)   Use other sources instead
II.   (30)   Not relevant
TI.   (1-28)   Use centers

(Question 5N)
I.   (01)   GS-6 (under 6,000)
II.   (02)   GS-9 (6,000 - 7,999)
III.   (03)   GS-11 (8,000 - 10,249)
IV.   (04)   GS-12 (10,250 - 11,999)
V.   (05)   GS-13 (12,000 - 13,939)
VI.   (06)   GS-14 (14,000 - 16,499)
VII.   (07)   GS-15 (16,500 - 18,999)
VIII. (08)   GS-16 (19,000 - 20,999)
IX.   (09)   GS-17 (21,000 - 23,999)
X.   (10)   GS-18 (24,000 - 26,999)
XI.   (11)   Sp A (27,000 - 29,999)
XII.   (12)   Sp B (30,000 - 34,999)
XIII. (13)   Sp C (over 35,000)

```
CHI-SQUARE (FF TABLE)      1C1.9C716
FF=  22

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   C.1585
MEAN( 5)=       5.27933   SD( 9)=     3.98282
MEAN( 5)=       2.07467   SD( 5)=     0.49534
```

Table 3-77. Use of Other Specialized Information Centers vs.
Type of Work Activity

```
   041    IS CROSS TABULATED WITH      054    OR.

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE 10

NUMBER OF APPLICATIONS= 1406

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     6      ?      1
    10      6      1


( 6)                (EXTREME RIGHT VALUE IS ROW TOTAL)
041                                         (Question 41)
   2 *  5122A 62 10102  453                  I.    (2)   No
   T*   5 15   4   1   7    30                II.   (1)   Yes
   R*  11 10  14   2  23   100
   C*  28 28  36  36  35    30               (Question 54)
   *                                         I.    (5)   Technical evaluation
   1 * 1315551CS 18191 1C46                  II.   (4)   Scientific and Engineering (nonmanagement)
   T*   5 4C   7   1  13    70               III.  (2)   Technical management
   R*  13 57 10   2  18   120                IV.   (1)   Administrative management
   C*  72 72 64 64 65     7C                 V.    (3)   Both administrative and technical management
   *
   ••••••••••••••••••••••••••
 (10)    1    3    4
 954          ?    4

COLUMN 182  171  205
 TOTAL    827   24

PERCENT  12   11   20
 TOTAL   55    2

GRAND TOTAL = 1456

CHI-SQUARE (OF TABLE)       8.84072
DF=   4

VALUES NOT ENTERED   1
  CASE NO.     VARIABLE   6    VARIABLE  10
```

```
  1C46           1          6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES.

CORRELATION COEFFICIENT  0.5432
MEAN( 10)=    2.61867   SD( 10)=    1.30424
MEAN(  6)=    1.55200   SD(  6)=    0.45928
```

Table 3-78. Encounter of Restrictions vs. Type of Work Activity

```
   Q42    IS CROSS TABULATED WITH    Q54    OR,

VARIABLE  7 IS CROSS TABULATED WITH VARIABLE 10

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     7       2       1
     10      5       1


   ( 7)             (EXTREME RIGHT VALUE IS ROW TOTAL)
 Q42
     2 *  6C2AC 73  5122  524
     T*    4  17   5   1   H    35
     P*   11  5C  14   2  23   1CO
     C*   33  32  43  32  41    75
       *
     1 *  12256 3  58  19173   975
     T*    8  38   7   1   2    65
     P*   13  58  1C   2  18   100
     C*   67  68  57  68  59    65
       *
       ******************************
    (10)   1      3      5
 Q54           2      4

 COLUMN 182   171   295
   TOTAL    823    28

 PERCENT  12   11    20
   TOTAL      55    2

 GRAND TOTAL= 1459

 CHI-SQUARE (FF TABLE)      14.3217?
   DF=    4

 VALUES NOT ENTERED    1
   CASE NO.     VARIABLE  7    VARIABLE 10




   1C44              2          0

 (THE FCLLCWING CCMPUTATICNS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SCME ARE EXCLUDED FRCM THE ABOVE TABLE).

 CORRELATICN CCFFFICIENT  C.0753
   MEAN( 10)=     2.63867    SD( 10)=     1.30424
   MEAN(  7)=     1.35000    SD(  7)=     0.47711
```

(Question 42)
I.   (2)   No
II.   (1)   Yes

(Question 54)
I.   (5)   Technical evaluation
II.   (4)   Scientific and Engineering (nonmanagement)
III.   (2)   Technical management
IV.   (1)   Administrative management
V.   (3)   Both administrative and technical management

Table 3-79. Kind of Work Position vs. Nature of Restrictions

```
Q55    IS CROSS TABULATED WITH    Q43    OR,

VARIABLE  A IS CROSS TABULATED WITH VARIABLE  5

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    A      12       1
    5       3       1
```

```
( 8)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q55
  12 •   4   4   3    11
  T•     1   1   1     2
  R•    36  36  27   100
  C•     2   2   5     2
     •
  11 •  15   8   2    25
  T•     3   2   0     5
  R•    60  32   8   100
  C•     7   3   3     5
     •
  10 •   8   2        10
  T•     2   0         2
  R•    86  20       100
  C•     4   1         2
     •
   9 •  16   1        17
  T•     3   0         3
  R•    94   6       100
  C•     7   0         3
     •
   8 •  18   9   1    28
  T•     3   2   0     5
  R•    64  32   4   100
  C•     8   4   2     5
     •
   7 •  17  24   1    42
  T•     3   5   0     8
```

(Question 55)
I.   (02) Research - basic
II.   (01) Research - applied
III. (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (06) Development - operational system
VII. (06) R&D support
VIII. (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII. (13) Customer relations

(Question 43)
I.   (1) Proprietary
II.   (2) Industrial Security
III. (3) Both (1) and (2)

```
  R•    40  57   2   100
  C•     8  10   2     8
     •
   6 •  15  23   5    43
  T•     3   4   1     8
  R•    35  53  12   100
  C•     7  10   8     8
     •
   5 •  43  38   9    90
  T•     8   7   2    17
  R•    48  42  10   100
  C•    19  16  14    17
     •
   4 •  26  31  13    70
  T•     5   6   2    13
  R•    37  44  19   100
  C•    17  13  20    13
     •
   3 •  17  37   8    62
  T•     3   7   2    12
  R•    27  60  13   100
  C•     8  16  12    12
     •
   2 •  54  47  22   113
  T•     8   9   4    22
  R•    39  42  19   100
  C•    20  20  34    22
     •
   1 •   1  11   2    14
  T•     0   2   0     3
  R•     7  79  14   100
  C•     0   5   3     3
     •
   ••••••••••••••••••
  ( 5)   1       3
  Q43    2

COLUMN  224   66
TOTAL   235

PERCENT  43   11
TOTAL
```

```
GRAND TOTAL=   525

CHI-SQUARE (OF TABLE)     64.54123
DF=    22

VALUES NOT ENTERED 975

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.1339
MEAN( 5)=     0.59467    SD( 5)=    0.90494
MEAN( 8)=     5.27667    SD( 8)=    2.76186
```

Table 3-80. Field of Work Position vs. Nature of Restrictions

```
____ 056    IS CROSS TABULATED WITH      043    OR,

VARIABLE  9 IS CROSS TABULATED WITH VARIABLE  5

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      9       9        1
      5       3        1


( 9)                 (EXTREME RIGHT VALUE IS R = TOTAL)
Q56
    9 *    1   4   1     6
    T*    0   1   0     1
    R*   17  67  17   100
    C*    0   2   2     1
    *
    8 *   10  10   1    21
    T*    2   2   0     4
    R*   48  48   5   100
    C*    4   4   2     4
    *
    7 *   23  20  11    54
    T*    4   4   2    10
    P*   43  37  20   100
    C*   10   9  17    10
    *
    6 *   35  20   5    60
    T*    7   4   1    11
    R*   58  33   8   100
    C*   16   9   8    11
    *
    5 *   51  76  19   146
    T*   10  15   4    28
    R*   35  52  13   100
    C*   23  32  29    28
    *
    4 *   67  59  17   143
    T*   13  11   3    27
```

```
    R*   47  41  12   100
    C*   30  25  26    27
    *
    3 *    8  19   4    31
    T*    2   4   1     6
    R*   26  61  13   100
    C*    4   8   6     6
    *
    2 *    5   1         6
    T*    1   0         1
    R*   83  17       100
    C*    2   2         1
    *
    1 *   28  21   7    56
    T*    5   4   1    11
    R*   50  38  13   100
    C*   13   9  11    11
    *
    **************
( 5)    1       3
Q43          2

COLUMN 223    66
TOTAL     234

PERCENT  43    13
TOTAL      45

GRAND TOTAL = 523

CHI-SQUARE (OF TABLE)       27.03493
DF=   16

VALUES NOT ENTERED 977

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0677
MEAN(  5)=     0.59467   SD(  5)=    0.90494
MEAN(  9)=     4.82200   SD(  9)=    1.98451
```

(Question 56)
I.   Production, Management and Social Sciences
      (32)   Miscellaneous arts and sciences
      (23)   Personnel and training
      (26)   Production and management
      (28)   Psychology and human engineering

II.   Medical Sciences
      (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
      (11)   Ground transportation equipment
      (13)   Installations and constructions
      (18)   Military sciences and operations
      (24)   Photography and other reproduction processes
      (29)   Quartermaster equipment and supplies
      (31)   Ships and marine equipment
      (33)   Transportation

IV.   Aeronautics and Space Technology
      (01)   Aircraft and flight equipment
      (12)   Guided missiles
      (19)   Navigation

V.   Electronics and Electrical Engineering
      (05)   Communications
      (06)   Detection
      (07)   Electrical equipment
      (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
      (03)   Chemical warfare equipment and materials
      (04)   Chemistry
      (10)   Fuels and combustion
      (14)   Materials (nonmetallic)
      (17)   Metallurgy
      (22)   Ordnance

VII.   Physical Science
      (02)   Astronomy, geophysics and geography
      (09)   Fluid mechanics
      (20)   Nuclear physics, and nuclear chemistry
      (21)   Nuclear propulsion
      (25)   Physics
      (27)   Propulsion systems

VIII.   Research and Research Equipment
      (30)   Research and research equipment

IX.   Mathematics
      (15)   Mathematics

(Question 43)
I.   (1)   Proprietary
II.   (2)   Industrial Security
III   (3)   Both (1) and (2)

Table 3-81.   Encounter of Difficulties vs. User's Highest Degree

```
     Q45     IS CROSS TABULATED WITH      Q50A    QB,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE 11

NUMBF  CF REPLICATIONS= 150C

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    6       2       1
   11       6       1


( 6)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q45                                          (Question 45)
   2 *  62 11322151 11 82  639               I   (2)  No
   9*  4  1 23 30  1  5    43                II.  (1)  Yes
   B*  10  2 10 24  2 13  100
   C*  32 35 4  51 42 52   43                (Question 50A)
   *                                         I.   (6)  None
   1 * 133 17476145 15 75  861               II   (1)  Associate's
   T*  9  1 32 10  1  7    57                III. (2)  Bachelor's
   R*  15  2 55 17  2  9  100                IV   (3)  Master's
   C*  68 61 60 49 58 98   57                V    (4)  Professio al
   *                                         VI.  (5)  Doctor's
   ***************************
(11)   1    3    5
Q50A        2    4    6

CCLUMN 195   798   26
 TOTAL      28   296   157

PERCENT  13   53    2
 TOTAL      2    20   1C

GRAND TOTAL= 150C

CHI-SQUARE (FF TABLE)      25.61C37
DF=  6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).




CORRELATION COEFFICIENT  C 1179
MEAN( 11)=      3.26733   SD( 11)=    1.29498
MEAN( 6)=      1.42000   SD( 6)=    0.49466
```

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Table 3-82. Encounter of Difficulties vs. Field of User's Highest Degree

```
      045    IS CROSS TABULATED WITH      Q50C    ON,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE 12         _ _

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      6       2       1
     12      14       1

( 6)              (EXTREME RIGHT VALUE IS ROW TOTAL)
045
   2 *  65 42 17  1 16 17101 26 51146 51 17 55 33  639
   7*   4  2  1  0  1  1  7  2  3 10  3  5  4  2   43
   8*  10  7  3  0  3  3 16  4  8 23  8  3  9  5  100
   C*  32 48 65 50 36 49 44 41 45 44 47 45 40 41   43

   1 * 135 46  9  1 29 18127 37 64186 58 21 82 48  861
   T*   9  3  1  0  2  1  8  2  4 12  4  1  5  3   57
   R*  16  5  1  0  3  2 15  4  7 22  7  2 10  6  100
   C*  67 52 35 50 64 51 56 59 55 56 53 55 60 59   57

   *****************************************************
  (12)    1    3    5    7    9   11   13
  Q50C       2    4    6    8   10   12   14

COLUMN 700   26   45  228  116  109  137
  TOTAL      **    2   35   63  332   38   81

PERCENT 13    2    3   15    8    7    9
  TOTAL       6    0    2    4   22    3    5

GRAND TOTAL= 1500

CHI-SQUARE (CF TABLE)        18.39004
DF=   13

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).




CORRELATION COEFFICIENT  C.0255
MEAN( 12)=      7.95400   SD( 12)=      3.98411
MEAN( 6)=      1.47600   SD(  6)=      0.49466
```

(Question 45)
I.   (2) No
II. (1) Yes

(Question 50C)
I.   No Degree
      (00) No Degree
II.   Behavioral and Social Sciences
      (01) Arts
      (17) Business and Business Administration
      (40) Economics
      (43) Education
      (01) English
      (01) General Studies
      (45) Geography
      (44) History
      (01) Journalism
      (01) Languages
      (43) Law
      (01) Library Science
      (36) Psychology   (01) Philosophy
      (46) Sociology   (42) Political Science
III. Biological and Medical Sciences
      (02) Biology
      (37) Dentistry
      (39) Medicine
      (35) Pharmacy
      (31) Physiology
      (39) Public Health
      (38) Zoology
IV.   Agriculture and Agricultural Engineering
and   (27) Agriculture and Agricultural Engineering
      (34)
V.   General Engineering
      (07) Engineering Management
      (07) General Engineering
      (12) Industrial Engineering
      (24) Systems Engineering
VI.   Civil Engineering
      (10) Civil Engineering
      (27) Architectural Engineering
      (15) Military Science
      (10) Naval Architectural Engineering
VII. Mechanical Engineering
      (13) Mechanical Engineering
      (25) Automotive Engineering
      (13) Engineering Mechanics
      (21) Maintenance Engineering
      (13) Marine Engineering
      (13) Mechanical Engineering
VIII. Chemical Engineering
      (09) Chemical Engineering
IX.   Aeronautical Engineering
      (20) Aeronautical Engineering
      (30) Aeronautics
      (08) Aerospace Engineering
X.   Electrical Engineering
      (11) Electrical Engineering
XI.   Chemistry
      (03) Chemistry
XII. Earth Science
      (23) Ceramic Engineering
      (33) Geology and Mineralogy
      (36) Geophysics
      (14) Metallurgy and Metallurgical Engineering
      (14) Mining Engineering
      (22) Petroleum Engineering
XIII. Physical Science
      (16) Applied Science
      (18) Engineering Science
      (16) General Science
      (32) Meteorology and Astronomy
      (05) Physics
XIV. Mathematical Science
      (04) Mathematical Science

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Table 3-83. Field of Work Position vs. Encounter of Difficulties

Q56 IS CROSS TABULATED WITH Q45 OR

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE 7

NUMBER OF REPLICATIONS, 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
  10   9   1
   7   2   1

```
(10)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q56
    9 •  15 12    27
    T•   1  1      2
    R•  56 44    100
    C•   2  2      2
    •
    8 •  78 36   114
    T•   5  2      8
    R•  68 32    100
    C•   9  8      8
    •
    7 •  103 84   187
    T•    7  8     13
    R•   55 45    100
    C•   12 13     13
    •
    6 •   86 73   159
    T•    6  5     11
    R•   54 46    100
    C•   10 11     11
    •
    5 •  236164   400
    T•   16 11     27
    R•   59 41    100
    C•   27 26     27
    •
    4 •  187149   336
    T•   13 10     22
```

```
    R•   56 44   100
    C•   22 23    22
    •
    3 •   47 37    84
    T•    3  2     6
    R•   56 44   100
    C•    5  6     6
    •
    2 •   10 20    30
    T•    1  1     2
    R•   33 67   100
    C•    1  3     2
    •
    1 •   97 62   159
    T•    6  4     11
    R•   61 39   100
    C•   11 10     11
    •
        ••••••••••••••
    ( 7)      1
Q45          2
```

(Question 56)
I.   Production, Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (23) Personnel and training
     (26) Production and management
     (28) Psychology and human engineering

II. Medical Sciences
     (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and constructions
     (18) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation

IV. Aeronautics and Space Technology
     (01) Aircraft and flight equipment
     (12) Guided missiles
     (19) Navigation

V.   Electronics and Electrical Engineering
     (05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics, electronic equipment

VI. Chemical Sciences and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance

VII. Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (25) Physics
     (27) Propulsion systems

VIII. Research and Research Equipment
     (30) Research and research equipment

IX. Mathematics
     (15) Mathematics

(Question 45)
I.   (2) No
II.   (1) Yes

CORRELATION COEFFICIENT -0.0206
MEAN(7) =   1.42600   SD(7)=   0.49466
MEAN(10) =   4.82200   SD(10)=   1.98451

```
COLUMN 859
 TOTAL    637

PERCENT  57
 TOTAL    43

GRAND TOTAL=  1496

CHI-SQUARE (OF TABLE)      15.68704
 DF =   8

VALUES NOT ENTERED   4
  CASE NO.      VARIABLE 10      VARIABLE  7
    120             0                1
    12              0                1
    107             0                2
    528             0                2
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

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Table 3-84. Encounter of Difficulties vs. User's
Equivalent GS Rating

```
____Q45____IS CROSS TABULATED WITH____Q58____CR,

VARIABLE  6 IS CROSS TABULATED WITH VARIABLE  9

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      6        2        1
      5        13       1
```

```
( 6)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q45
   2 *    521C511*1C2 15 25 10  9  5  ~  3  639
   T*     1  6  7  8 11  5  2  2  1  0  0  0   43
   P*     2 14 16 18 25 12  5  4  1  1  1  0  10C
   C*    32 22 36 41 55 43 41 53 30 53 80 75   43
   *
   3 *   1516*184170132105 41 22 16  3  1  1  861
   T*     1 11 12 11  9  7  3  '  1  C  C  0   57
   P*     2 15 21 20 15 12  5  3  2  0  0  0  100
   C*    68 74 64 59 45 57 59 47 64 3u 20 25   57
   *
   ***************************************************
  ( 9)    2     4     6     8    1C    12
  Q58        3     5     7     9    11    13

COLUMN   28   259   254   74   25    5
 TOTAL    259  286   184   45    8    4

PERCENT    2   19    20    5    2    0
  TOTAL      17   19    12    3    1    0

GRAND TOTAL =  1500

CHI-SQUARE (OF TABLE)       38.81740
DF=   11
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
CORRELATION COEFFICIENT  0.1C3P
MEAN(  9)=      5.27933   SD(  9)=       1.88262
MEAN(  6)=      1.42600   SD(  6)=       0.49466
```

(Question 45)
I.   (2. No
II. (1) Yes

(Question 58)
I.   (01) GS-6 (under 6,000)
II.   (02) GS-9 (6,000 - 7,999)
III   (03) GS-11 (8,000 - 10,249)
IV   (04) GS-12 (10,250 - 11,999)
V.   (05) GS-13 (12,000 - 13,999)
VI.   (06) GS-14 (14,000 - 16,499)
VII. (07) GS-15 (16,500 - 18,999)
VIII. (08) GS-16 (19,000 - 20,999)
IX   (09) GS-17 (21,000 - 23,999)
X.   (10) GS-18 (24,900 - 26,999)
XI   (11) Sp A (27,000 - 29,999)
XII   (12) Sp B (30,000 - 34,999)
XIII. (13) Sp C (over 35,000)

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Table 3-85. Kind of Work Position vs. Nature of Difficulties

C55   IS CROSS TABULATED WITH   Q46   OR.

VARIABLE A IS CROSS TABULATED WITH VARIABLE 2

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
A   12   1
2   9   1

(8)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q55
```
 12 •       2   5     9
    Y•       1   0     1
    R•     67  35   100
    S•      2   1     1
     •
 11 •    1  15  10    26
    Y•    0   2   2     4
    R•    4  68  38   100
    C•    2   4   4     4
     •
 10 •    2   8   2    12
    Y•    0   1   0     2
    R•   17  67  17   100
    C•    4   2   1     2
     •
  9 •    3  16  15    23
    Y•    0   2   2     4
    R•   13  43  43   100
    C•    6   5   4     4
     •
  8 •    4  26  12    42
    Y•    1   4   2     7
    R•   10  62  29   100
    C•    8   8   5     7
     •
  7 •    6  29  25    60
    Y•    2   5   4    10
```

(Question 53)
I   (02) Research - basic
II   (01) Research - applied
III (11) System analysis
IV   (03) Development - advanced
V   (04) Development - engineering
VI   (05) Development - operational system
VII (06) R&D support
VIII (07) Test or evaluation
IX   (08) Production processes
X   (09) Production end-items
XI   (10) Reliability or quality control
XII (12) Customer relations

(Question 46)
I   Utility of Information
     (1) Attributable to inside of company
     (2) Attributable to outside of company
     (3) Attributable to both
II   Timely Acquisition of Information
     (4) Attributable to inside of company
     (5) Attributable to outside of company
     (6) Attributable to both
III. Timely Awareness of Information
     (7) Attributable to inside of company
     (8) Attributable to outside of company
     (9) Attributable to both

```
 R•      10  48  42   100
 C•      13   8  10    10
  •
6 •       3  24  24    51
Y•        0   4   4     8
R•        6  47  47   100
C•        6   7  10     8
 •
5 •      11  63  45   119
Y•        2  10   7    19
R•        9  53  38   100
C•       23  15  18    19
 •
4 •       6  26  37    71
Y•        1   4   6    11
R•        8  36  52   100
C•       13   8  15    11
 •
3 •       5  49  17    71
Y•        1   6   3    11
R•        7  67  24   100
C•       10  15   7    11
 •
2 •       6  56  45   107
Y•        1   5   7    17
R•        6  53  42   100
C•       13  13  19    17
 •
1 •       1   5  16    42
Y•        0   2   8     6
R•        3  56  41   100
C•        2   5   6     6
 •
**********************
( 2)      1      1
Q46             2

COLUMN   48    347
TOTAL         314

PERCENT   8      3
TOTAL         53
```

GRAND TOTAL =   628

CHI-SQUARE (CF TABLE)   26.29615
DF= 22

VALUES NOT ENTERED 872

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0052
MEANS 2)=   0.96933   SD(2)=   1.20832
MEAN(8)=   5.27667   SD(8)=   2.76186

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Table 3-86. Field of Work Position vs. Nature of Difficulties

Q56   IS CROSS TABULATED WITH   Q46   OR,

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE 4

NUMBER OF REPLICATIONS: 1500

VARIABLE MAXIMUM MINI   (AS SPECIFIED)
   1C   9   1
   4   3   1

(10)			(EXTREME RIGHT VALUE IS ROW TOTAL)
Q56			
9 •	9	3	12
T•	1	0	2
R•	75	25	100
C•	5	1	2
•			
8 •	5 21	9	35
T•	1 3	1	6
R•	14 60	26	100
C•	10 6	5	8
•			
7 •	6 44	31	81
T•	1 7	5	13
R•	7 54	38	100
C•	13 13	13	13
•			
6 •	7 39	29	75
T•	1 6	5	12
R•	9 52	39	100
C•	15 12	12	12
•			
5 •	15 88	56	159
T•	2 14	9	25
R•	9 55	35	100
C•	31 27	23	25
•			
4 •	10 66	69	145
T•	2 11	11	22

R•	7 46	46	100
C•	21 20	28	23
•			
3 •	2 23	12	37
T•	0 4	2	6
R•	5 62	32	100
C•	4 7	5	6
•			
2 •	2 11	7	20
T•	0 2	1	3
R•	10 55	35	100
C•	4 3	3	3
•			
1 •	1 31	30	62
T•	0 5	5	10
R•	2 50	48	100
C•	2 9	12	10
•			

•••••••••••••••••
(4)   1   3
Q46   2

COLUMN   48   246
 TOTAL   332

PERCENT   8   39
 TOTAL   53

GRAND TOTAL=   626

CHI-SQUARE (OF TABLE)
DF=   16

VALUES NOT ENTERED 874

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0415
MEAN(4)=   0.96933   SD(4)=   1.20832
MEAN(10)=   4.82200   SD(10)=   1.90451

(Question 56)
I.   Production Management and Social Sciences
   (32) Miscellaneous arts and sciences
   (23) Personnel and training
   (26) Production and management
   (28) Psychology and human engineering

II.   Medical Sciences
   (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
   (11) Ground transportation equipment
   (13) Installations and constructions
   (18) Military sciences and operations
   (24) Photography and other reproduction processes
   (29) Quartermaster equipment and supplies
   (31) Ships and marine equipment
   (33) Transportation

IV.   Aeronautics and Space Technology
   (01) Aircraft and flight equipment
   (12) Guided missiles
   (19) Navigation

V.   Electronics and Electrical Engineering
   (05) Communications
   (06) Detection
   (07) Electrical equipment
   (08) Electronics, electronic equipment

VI.   Chemical Science and Materials
   (03) Chemical warfare equipment and materials
   (04) Chemistry
   (10) Fuels and combustion
   (14) Materials (nonmetallic)
   (17) Metallurgy
   (22) Ordnance

VII. Physical Science
   (02) Astronomy, geophysics and geography
   (09) Fluid mechanics
   (20) Nuclear physics and nuclear chemistry
   (21) Nuclear propulsion
   (25) Physics
   (27) Propulsion systems

VIII. Research and Research Equipment
   (30) Research and research equipment

IX   Mathematics
   (15) Mathematics

(Question 46)
I.   Utility of Information
   (1) Attributable to inside of company
   (2) Attributable to outside of company
   (3) Attributable to both
II   Timely Acquisition of Information
   (4) Attributable to inside of company
   (5) Attributable to outside of company
   (6) Attributable to both
III. Timely Awareness of Information
   (7) Attributable to inside of company
   (8) Attributable to outside of company
   (9) Attributable to both

Table 3-87. Field of User's Highest Degree vs.
User's Highest Degree

Q5CC IS CROSS TABULATED WITH Q50A, OR,

VARIABLE 12 IS CROSS TABULATED WITH VARIABLE 11

NUMBER CF APPLICATIONS: 1900

GRAND TCTAL = 1500

CHI-SQUARE (TABLE) 1900.54155
DF= 65

VARIABLE MAXIPUM MINIMUM (AS SPECIFIED)
| 12 | 14 | 1 |
| 11 | A | 1 |

(THE FCLLCWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SCHE ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATICK COEFFICIENT C.4637
MEAN(11)= 3.26733   SOF 11)= 1.29498
MEAN(12)= 7.95400   SOF 12)= 3.98411

(121)   (EXTREME PIGHT VALUE IS ROW TCTAL)
Q50C
14 •	2 52 19	8	81
T•	C 3 1	1	5
P•	2 64 23	10	100
C•	7 7 6	5	5

13 •	2 7 74 1 24	137
T•	C 5 3 0 2	9
P•	1 53 24 1 18	100
C•	7 7 13 4 15	9

12 •	18 11	9	38
T•	1 1	1	3
P•	47 29	24	10%
C•	2 4	6	3

11 •	34 14 10 51	109
T•	2 1 1 3	7
R•	31 13 9 47	100
C•	4 5 38 32	7

10 •	1C232 76 2 12	332
T•	1 15 5 0 1	22
R•	3 70 23 1 4	1CO
C•	38 29 26 8 8	22'

9 •	83 29 1 3	116
T•	6 2 0 C	8
R•	72 25 1 3	100
C•	1C 10 4 2	8

8 •	41 11 2 9	63
T•	3 1 0 1	4
R•	65 17 3 14	1UC
C•	5 4 8 6	4

7 •	7167 45 4 5	228
T•	C 11 3 0 0	15
R•	3 73 20 2 2	1CO
C•	28 21 15 15 3	15

6 •	30 4	1	35
T•	2 0	0	2
R•	86 11	3	100
C•	4 1	1	2

5 •	3 29 10 1 2	45
T•	C 2 1 0 0	3
R•	7 64 22 2 4	100
C•	11 4 3 4 1	3

4 •	2		2
T•	0		C
P•	100		100
C•	0		0

3 •	4 3	19	26
T•	0 0	1	2
P•	15 12	73	10C
C•	1 1	12	2

2 •	1 13 32 4 14	88
T•	C 2 2 0 1	6
R•	1 18 41 5 16	10C
C•	4 4 12 15 5	6

1 •	1C5 3 1	1	200
T•	11 0 0	0	13
R•	97 1 0	0	100
C•	1CC 11 C	4	13

•••••••••••••••••••••••••••••••

(111)   1   3   4
Q50A

CCLUMN   104   798   26
TOTAL   74   258   147

PERCENT   11   53   3
TOTAL   3   20   1C

(Question 50C)
I.	No Degree
	(00) No Degree
II.	Behavioral and Social Sciences
	(01) Arts
	(17) Business and Business Administration
	(40) Economics
	(41) Education
	(01) English
	(01) General Studies
	(45) Geography
	(44) History
	(01) Journalism
	(01) Languages
	(43) Law
	(01) Library Science
	(06) Psychology (01) Philosophy
	(46) Sociology (42) Political Science
III.	Biological and Medical Sciences
	(03) Biology
	(37) Dentistry
	(39) Medicine
	(36) Pharmacy
	(31) Physiology
	(39) Public Health
	(38) Zoology
IV.	Agriculture and Agricultural Engineering
and	(27) Agriculture and Agricultural Engineering
	(34)
V.	General Engineering
	(07) Engineering Management
	(07) General Engineering
	(12) Industrial Engineering
	(24) Systems Engineering
VI.	Civil Engineering
	(10) Civil Engineering
	(27) Architectural Engineering
	(15) Military Science
	(10) Naval Architectural Engineering
VII.	Mechanical Engineering
	(13) Mechanical Engineering
	(25) Automotive Engineering
	(13) Engineering Mechanics
	(21) Maintenance Engineering
	(13) Marine Engineering
	(13) Mechanical Engineering
VIII.	Chemical Engineering
	(09) Chemical Engineering
IX.	Aeronautical Engineering
	(20) Aeronautical Engineering
	(30) Aeronautics
	(08) Aerospace Engineering
X.	Electrical Engineering
	(11) Electrical Engineering
XI.	Chemistry
	(03) Chemistry

(Question 50A)
I.	(6)	None
II.	(1)	Associate's
III.	(2)	Bachelor's
IV.	(3)	Master's
V.	(4)	Professional
VI.	(5)	Doctor's

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Table 3-88. Kind of Work Position vs. User's Highest Degree

```
      Q55    IS CROSS TABULATED WITH      Q50A    OP,

VARIABLE   7 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      7       12       1
     11        6       1
```

```
( 7)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q55
  12 *    3    17   3   1   2    26
  T*     0     1   0   0   0     2
  P*    17    65  17   4   8   100
  C*     2     2   1   4   1     2

  11 *   1C   1  40   9   2   1    63
  T*      1   C   3   1   0   0     4
  P*     16   2  63  14   3   2   100
  C*      4   4   5   3   8   1     4

  10 *   12   4  25   1            42
  T*      1   C   2   0             3
  P*     29  1C  6C   2           100
  C*      6  14   3   0             3

   9 *   19   2  36   8   1   3    65
  T*      1   C   2   1   0   0     5
  P*     28   3  52  12   1   4   100
  C*     10   7   5   3   4   2     5

   8 *   27   6  83   7           123
  T*      2   C   6   C             8
  P*     22   5  67   6           100
  C*     14  21  10   2             8

   7 *   31   1  77  24   6  12   151
  T*      2   C   5   2   0   1    10
```

```
  P*    21   1  51  16   4   8   100
  C*    16   4  10   8  23   8    10

   6 *   24   2  9C  23          139
  T*      2   C   6   2             9
  P*     17   1  65  17          100
  C*     12   7  11   8             9

   5 *   46  6 182  41   2   5   282
  T*      3   C  12   3   0   C    19
  P*     16   2  65  15   1   2   100
  C*     24  21  23  14   8   3    19

   4 *    5   3  80  47   1   6   146
  T*      1   C   5   3   0   C    10
  P*      6   2  55  32   1   4   100
  C*      5  11  10  16   4   4    10

   3 *    5      86  43   1  1C   149
  T*      1       6   3   0   1    10
  P*      6      58  29   1   7   100
  C*      5      11  15   4   6    10

   2 *    6   3  72  82   8  75   244
  T*      C   C   5   5   1   4    16
  P*      2   1  3C  34   3  31   100
  C*      2  11   9  29  31  48    16

   1 *    1      3   8   4  44    65
  T*      C      1   1   C   3     4
  P*      2     14  12   6  66   100
  C*      1      1   3  15  27     4

  **********89*****************
  (11)    1     3      5    6
  Q50A    2       4      6
```

```
CCLUMN  158   257   26
 TOTAL         28  766  167

PERCENT  11    53    2
 TOTAL          2   29  1C
```

(Question 55)
I.   (02) Research - basic
II.   (01) Research - applied
III.   (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (05) Development - operational system
VII.   (06) R&D support
VIII.   (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII.   (12) Customer relations

(Question 50A)
I.   (6) None
II.   (1) Associate's
III.   (2) Bachelor's
IV.   (3) Master's
V.   (4) Professional
VI.   (5) Doctor's

```
GRAND TOTAL = 1499

CHI-SQUARE (FF TABLE)        621.49198
DF=   55

VALUES NOT ENTERED   1
   CASE NO.     VARIABLE  7    VARIABLE 11
     340            0              3

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT = C.4031
MEAN( 11)=      3.26733   SD( 11)=     1.29498
MEAN(  7)=      5.27667   SD(  7)=     3.76186
```

C6-2442/030

Table 3-89. Field of Work Position vs. User's Highest Degree

```
C5A    IS CROSS TABULATED WITH    C50A   OR,
VARIABLE  A IS CROSS TABULATED WITH VARIABLE II
NUMBER OF REPLICATIONS= 1500
VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   A       9       1
   11      6       1
```

```
(  A'              (EXTREME RIGHT VALUE 1, ROW TOTAL)
056
  9 •         12 10      5   27
  1 •          1  1      0    2
  B •         44 37     15  100
  C •          2  3      3    2
  •
  8 •  18  2 71 16   1  6  114
  1 •   1  6  5  1   0  0    8
  B •  16  2 62 14   1  5  100
  C •   5  2  5  5   4  4    9
  •
  7 •   5    51 45   3 15  187
  1 •   1   6  3  0   3     13
  B •   5   49 24   2 21  100
  C •   5   11 15  12 25   11
  •
  6 •   5  2 62 29  10 51  159
  1 •   0  0  4  2   1  3   11
  B •   3  1 39 18   6 32  100
  C •   3  7  8 10  18 32   11
  •
  5 •  66 14212 79      9  400
  1 •   4  1 16  5      1   27
  B •  16  3 58 20      7  100
  C •  14 50 29 27      6   27
  •
  4 •  46  52C1 68   5  4  316
  1 •   1  1 13  5   0  0   22
```

```
  B •  15  1 60 20   1  1  100
  C •  24 12 29 23  19  3   22
  •
  1 •  14    44 18      8   84
  1 •   1     1  1      1    6
  B •  17   42 21     1C  1C0
  C •   7    6  6      5    6
  •
  2 •         4  3     23   30
  1 •         0  0      2    2
  B •        13 10     77  100
  C •         1  1     15    2
  •
  1 •  14  1 79 26   7 12  159
  1 •   7  0  5  2   0  1   11
  B •  21  1 50 16   4  8  100
  C •  17  4 10  9  27  8   11
  •
  •••••••••••••••••••••••••
  (11)    1    3    5
Q50A      2    4    6
```

```
COLUMN  155  796   26
TOTAL    25  294  157

PERCENT  11   53    2
TOTAL     2   20   10

GRAND TOTAL=  1494

CHI-SQUARE (CF TABLE)     451.2(95)
DF=   40

VALUES NOT ENTERED   4
 CASE NO.    VARIABLE  P   VARIABLE  11
   120           0            3
   122           0            3
   197           0            4
   318           0            4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).
   4)
```

(Question 56)
I. Production, Management and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II Medical Sciences
- (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV. Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided missiles
- (19) Navigation

V. Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI. Chemical Science and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (1C) Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII. Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII. Research and Research Equipment
- (30) Research and research equipment

IX. Mathematics
- (15) Mathematics

(Question 50A)
I.   (6) None
II. (1) Associate's
III. (2) Bachelor's
IV. (3) Master's
V.   (4) Professional
VI. (5) Doctor's

```
CORRELATION COEFFICIENT  0.1013
MEAN( 11)=    3.26733   SD( 11)=   1.29498
MEAN(  A)=    4.42200   SD(  8)=   1.98451
```

Table 3-90. User's Equivalent GS Rating vs. User's Highest Degree

```
   ..Q58    IS CROSS TABULATED WITH    Q50A   OR,

VARIABLE  9 IS CROSS TABULATED WITH VARIABLE 11

NUMBER CF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    9      13        1
   11      6         1
```

```
( 9)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q58
  13 •                          4    4
    T•                          C    0
    R•                        100  100
    C•                          5    0
     •
  12 •          1               4    5
    T•          0               0    0
    R•         20              86  100
    C•          0               5    0
     •
  11 •    1     1   2           4    8
    T•    C     0   0           0    1
    R•   13    13  25          50  100
    C•    1     0   1           3    1
     •
  10 •    1     6   5   1  12   25
    I•    0     C   C   0   1    2
    P•    4    24  20   4  48  100
    C•    1     1   2   4   8    2
     •
   9 •    .    12  17   1  18   49
    T•    C     1   1   0   1    3
    R•    2    24  35   2  37  100
    C•    1     2   6   4  11    3
     •
   8 •    4   1 77  21   6  16   70
    T•    C   C  1   1   0   1    5
```

(Question 58)
I.   (01) GS-6 (under 6,000)
II.   (02) GS-9 (6,000 - 7,999)
III. (03) GS-11 (8,000 - 10,249)
IV.   (04) GS-12 (10,250 - 11,999)
V.   (05) GS-13 (12,000 - 13,999)
VI.   (06) GS-14 (14,000 - 16,409)
VII. (07) GS-15 (16,500 - 18,999)
VIII. (08) GS-16 (19,000 - 20,999)
IX.   (09) GS-17 (21,000 - 23,999)
X.   (10) GS-18 (24,000 - 26,999)
XI.   (11) Sp A (27,000 - 29,999)
XII. (12) Sp B (30,000 - 34,999)
XIII. (13) Sp C (over 35,000)

(Question 50A)
I.   (5) None
II.   (1) Associate's
III. (2) Bachelor's
IV.   (3) Master's
V.   (4) Professional
VI.   (0) Doctor's

```
   R•    6   1 21  30   2  23  100
   C•    2   4  3   7  23  16    5
    •
   7 •    4   1 77  47   2  36  184
   T•    C   C  5   4   1   2   12
   R•    2   1 42  41   5  20  100
   C•    2   4 10  19  35  23   12
    •
   6 •   19  2155  71   3  44  254
   T•    1   C 10   5   0   3   20
   P•    6   1 53  74   1  15  100
   C•   10   7 19  24  12  28   20
    •
   5 •   35  4170  56   4  13  286
   T•    3   0 11   4   0   1   19
   P•   14   1 49  20   1   5  100
   C•   20  14 21  19  15   8   19
    •
   4 •   50 10182  40   1   6  285
   T•    3   1 12   3   0   C   19
   P•   17   3 63  14   0   2  100
   C•   26  26 23  14   4   4   19
    •
   3 •   64 10159  24   1       258
   T•    4   1 11   2   C       17
   P•   25   4 61  10   0       100
   C•   33  36 20   8   4       17
    •
   2 •   12    14   2           24
   T•    1     1   C            2
   P•   48    49   7           100
   C•    6     2   1            2
    •
   •••••••••••••••••••••••••••••
  (11)   1    2   4   6
  Q50A        2   4   6
```

```
COLUMN  155  794   26
 TOTAL    78  294  157

PERCENT  10   53    2
 TOTAL     2   20   10
```

```
GRAND TOTAL= 1500

CHI-SQUARE (CF TABLE)       447.41825
DF=   55

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.

CORRELATION COEFFICIENT  0.4651
MEAN( 11)=      3.26713   SD( 11)=      1.79498
MEAN(  9)=      5.27513   SD(  9)=      1.88782
```

Table 3-91.   Interviewer's Assessment of User's Information
Needs vs. User's Highest Degree

```
     055     IS CROSS TABULATED WITH      J5OA     OR,

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF APPLICATIONS  1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      10        3      1
      11        7      1


(10)              (EXTREME RIGHT VALUE IS ROW TOTAL)          (Question 59)
059                                                          :.    (3)   Insignificant need
    3 *  33  5220119   7  94   482                           II.   (2)   Moderate need
    T*   7   1 15   8   0   6    32                          III.  (1)   Large need
    R*   7   2 46 2?   1  20   100
    C*  17  32 28 40  27  60    32
    *                                                        (Question 50A)
    2 *  51 1539A150  17  57   728                           I     (6)   None
    T*   6   1 27 10   1   4    49                           II.   (1)   Associate's
    R*  13   2 55 21   2   8   100                           III.  (2)   Bachelor's
    C*  47  54 50 51  65  36    49                           IV.   (3)   Master's
    *                                                        V.    (4)   Professional
    1 *  71  41P0 27   2   6   290                           VI.   (5)   Doctor's
    T*   5   0 12   2   0   0    19                              .
    R*  24   1 42   9   1   2   100
    C*  36  14 23   5   9   4    19
    *
    ************************************
(11)     1     3     5
050A         2     4     6

CCLUMN 195    75P    26
  TOTAL       2P    756    157

PERCENT  13    53     2
  TOTAL        2    20    10

GRAND TOTAL  1500



CHI-SQUARE (CF TABLE)     141.84414
DF=   10

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.2814
MEAN( 11)=       3.26733   SD( 11)=     1.29498
MEAN( 10)=       2.12P0C   SD( 10)=     0.70613
```

Table 92.   User's Highest Degree vs. Interviewer's Assessment
of Task Creativity

```
      Q50A    IS CROSS TABULAT'C WITH      Q63     OR,

  VARIABLE  3 IS CROSS TABULATED WITH VARIABLE  2

  NUMBER OF REPLICATIONS= 1500

  VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     3       6       1
     2       4       1
```

```
 ( 3)              (EXTREME RIGHT VALUE IS ROW TOTAL)
 Q50A
   6 *    1   7 41108   157              (Question 50A)
   T*     0   0   3   7    10            I.    (6)   None
   R*     1   4  26  69   100            II.   (1)   Associate's
   C*     2   2   7  18    10            III.  (2)   Bachelor's
   *                                     IV.   (3)   Master's
   5 *    1   1  14  10    26            V.    (4)   Professional
   T*     0   0   1   1     2            VI.   (5)   Doctor's
   R*     4   4  54  38   100
   C*     2   0   3   2     2            (Question 63)
   *                                     I.    (1)   Communication of existing information
   4 *    7  32126131   296             II    (2)   Rearrangement of existing information,
   T*     0   2   8   9    20                              with little evaluation or analysis
   P*     2  13  43  44   100           III.  (3)   Extensive evaluation and analysis of existing data
   C*    13  11  23  21    20           IV    (4)   Creation of new information, systems, or hardware
   *
   3 * 34178299298   798
   T*     2  12  19  20    53
   R*     4  22  36  37   100
   C*    62  62  53  49    53
   *
   2 *    1   9  10   8    28
   T*     0   1   1   1     2
   R*     4  32  36  29  '00
   C*     2   3   2   1     2
   *
   1 *   11  58  67  59   195
   T*     1   4   4   4    13
```

```
     R*     6  30  34  30   100
     C*    20  20  12  10    13
     *
           **********************
   ( 2)     1      3
   J63      2      4

  COLUMN   55   548
   TOTAL   283   614

  PERCENT   «    37
   TOTAL    19    41

  GRAND TOTAL= 1500

  CHI-SQUARE (OF TABLE)       107.45451
  DF=   .5

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT  0.2313
  MEAN( 2)=        3.14733   SD( 2)=        0.85055
  MEAN( 3)=        3.26733   SD( 3)=        1.29498
```

Table 3-93. Kind of Work Position vs. Field of User's Highest Degree

```
    Q55      IS CROSS TABULATED WITH       C50C     OR,

VARIABLE   7 IS CROSS TABULATED WITH VARIABLE 12

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    7        12       1
   12        14       1
```

```
( 7)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q55
12 *   1   4    2  1  1   4  3   1  4   2  1            26
  T*   C   C    C  0  0   0  C   0  0   0  0             2
  P*  12  1F    R  4  4  15 12   4 15   0  4           100
  C*   1   5   100  2  3   2  5   1  1   2  3             2
   *
11 *  11   3         3    4  6   4 17   3  2  5  5      43
  T*   1   C         0    0  0   0  1   0  0  0  0       Q
  P*  17   5         5    6 10   6 27   5  3  8  8     100
  C*   5   3         7    2 1C   3  5   5  5  4  6       4
   *
1C *  12   4         2  1 12  2     7           1  1    42
  T*   1   C         0  0  1  0     0           0  0     3
  P*  29  1C         5  2 29  5    17           7  2   100
  C*   4   5         4  3  4  3     2           1  1     3
   *
 9 *  19   5         3   15 12  1  3  6   5  1  1      69
  T*   1   C         0    1  1  0  0  0   0  0  0       5
  P*  28   7         4   22 17  1  4  6   7  1  1     100
  C*   9   6         7    7 19  1  1  4 13  1  1       5
   *
 8 *  28   5         4  5 18  2 16 29  2  3  3  7     123
  T*   2   0         C  C  1  C  1  2  C  0  0  0       8
  P*  23   4         3  4 15  2 13 24  2  2  2  6     100
  C*  14   6         9 14  8  3 14  3  5  8  2  9       8
   *
 7 *  31  14   5     4  3 23  4  7 19 11  2 13 15     151
  f*   2   1   0     0  0  2  0  0  1  1  C  1  1      10

 P*  21   5   3     3  2 15  3  5 13  7  1  9 10     100
 C*  15  16  19     9  9 10  6  6  6 1C  5  9 19      10
   *
 6 *  24   6         4  3 22  5  6 45  6    11  9     139
  T*   2   C         0  C  1  0  C  3  C     1  1       9
  P*  17   4         3  2 16  4  4 32  3     8  6     100
  C*  12   7         9  9 10  R  5 14  4     8 11       9
   *
 5 *  47   4         5 10 52  9 23 94  7  3 24  4     282
  T*   3   C         0  1  3  1  2  6  0  0  2  0      19
  P*  17   1         2  4 18  3  8 33  2  1  9  1     100
  C*  23   5        11 29 23 14 20 28  6  8 18  5      19
   *
 4 *  1C   2         2  6 26  3 24 49  1  3 15  5     146
  T*   1   C         0  0  2  0  2  3  0  0  1  0      10
  P*   7   1         1  4 18  2 16 34  1  2 10  3     100
  C*   5   2         4 17 11  5 21 15  1  8 11  6      10
   *
 3 *  1C  17   2    11  4 18  6 16 28  3  2 14 18     149
  T*   1   1   0     1  C  1  0  1  2  0  0  1  1      10
  P*   7  11   1     7  3 12  4 11 19  2  1  9 12     100
  C*   5  19   8    24 11  8 10 14  8  3  5 10 22      10
   *
 2 *   4  20  13     6  2 29  9 15 34 46 15 39 12     244
  T*   0   1   1     0  0  2  1  1  2  3  1  3  1      16
  P*   2   8   5     2  1 12  4  6 14 19  6 16  5     100
  C*   2  23  50    13  6 13 14 13 10 42 39 28 15      16
   *
 1 *   3   4   6         5  2  3  2 25  2 11  4      65
  T*   C   C   0         0  C  0  0  2  0  1  0       4
  P*   2   6   9         5  3  5  3 35  3 17  6     100
  C*   0   5  23         2  3  1  1  2  5  8  5       4
   *
**************************************************************
 (12)    1     3     5     7     9    11    13
Q50C        2     4     6     8    10    12    14

CCLUMN 2CC    26    45   228   118   109   137
TOTAL    PP     2    39    63   131    58    91

PERCENT  13     2     3    15     8     7     9
TOTAL     6     0     2     4    22     3     5
```

(Question 55)
I.	(02)	Research – basic
II.	(01)	Research – applied
III.	(11)	System analysis
IV.	(03)	Development – advanced
V.	(04)	Development – engineering
VI.	(05)	Development – operational systems
VII.	(06)	R&D support
VIII.	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII.	(13)	Customer relations

(Question 50C)
I. No Degree
   (00) No Degree
II. Behavioral and Social Sciences
   (01) Arts
   (17) Business and Business Administration
   (40) Economics
   (41) Education
   (01) English
   (01) General Studies
   (45) Geography
   (44) History
   (01) Journalism
   (01) Languages
   (43) Law
   (01) Library Science
   (06) Psychology   (01) Philosophy
   (46) Sociology   (42) Political Science
III. Biological and Medical Sciences
   (02) Biology
   (37) Dentistry
   (39) Medicine
   (35) Pharmacy
   (31) Physiology
   (39) Public Health
   (38) Zoology
IV. Agriculture and Agricultural Engineering
   and (27) Agriculture and Agricultural Engineering
   (34)
V. General Engineering
   (07) Engineering Management
   (07) General Engineering
   (12) Industrial Engineering
   (24) Systems Engineering
VI. Civil Engineering
   (10) Civil Engineering
   (27) Architectural Engineering
   (15) Military Science
   (10) Naval Architectural Engineering
VII. Mechanical Engineering
   (13) Mechanical Engineering
   (25) Automotive Engineering
   (13) Engineering Mechanics
   (21) Maintenance Engineering
   (13) Marine Engineering
   (13) Mechanical Engineering
VIII. Chemical Engineering
   (09) Chemical Engineering
IX. Aeronautical Engineering
   (20) Aeronautical Engineering
   (30) Aeronautics
   (08) Aerospace Engineering
X. Electrical Engineering
   (11) Electrical Engineering
XI. Chemistry
   (03) Chemistry

Table 3-93. (Continued)

```
GRAND TCTAL=  1455

CHI-SU  PE ICF TABLFI        792.7C25C
DF=  143

VALUES RPT FNTFFEC   1
   CASF NO=    VARIABLE  7     VARIABLE 12
      54C          J             1C                      VG.   Larth Science
                                                               (24)  Ceramic Engineering
(THE FCLLCWING CCMPUTATIONS APE BASED CN ALL DATA AS ENTCPED         (33)  Geology and Mineurology
EVEN IF SCME ARE EXCLUDED FP M THE ABCVE TABLES.                     (36)  Geophysics
                                                                    (14)  Metallurgy ar  Metallurgical Engineering
CORRELATICN CCEFFICIENT =C./C4C                                      (14)  Mining Engineering
MEAN( 12)=         7.95470   SD( 12)=        3.98411                 (22)  Petroleum Engineering
MEAN(  7)=         5.21667   SD(  7)=        2.76186          XIII.  Physical Science
                                                                    (16)  Applied Science
                                                                    (19)  Engineering Science
                                                                    (16)  General Science
                                                                    (32)  Meteorology and Astronomy
                                                                    (05)  Physics
                                                             XIV    Mathematical Science
                                                                    (64)  Mathematical Science
```

Table 3-94. Field of Work Position vs. Field of User's Highest Degree

```
Q56     IS CROSS TABULATED WITH       Q50C ___ OR, _____

VARIABLE _8 IS CROSS TABULATED WITH VARIABLE 12

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    8       9      1
   12      14      1
```

```
( 8)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q56
   9 *              1   1  1          2   3        2 19  27
   1*              0   0  0          0   3        0  1   2
   8*              4   4  4          7   3        7 70 100
   C*              2   3  0          1   3        1 23   2
   *
   8 *  19 11   1   5   2 10   2   3 12   4   1 15 29 114
   T*    1  1   0   0   0  1   0   0  1   0   0  1  2   8
   8*   17 10   1   4   2  9   2   3 11   4   1 13 25 100
   C*    9 13   4  11   6  4   3   3  4   4   3 11 36   8
   *
   7 *  10  3       6   3 48 15  18 14 12   5 46  7 187
   T*    1  C       0   0  3  1   1  1  1   0  3  0  13
   7*    5  2       3   2 26  8  10  7  6   3 25  4 100
   C*    6  1      13   9 21 24  16  4 11 14 34  9  13
   *
   6 *   6  3   1       2 14 22   4  1 78 19   8  3 159
   T*    0  C   0   0   1  1  0   0  5  1   1  0  11
   6*    4  2   1       1  9 14   3  1 48 12   5  2 100
   C*    3  3  50       6  6 35   3  0 70 51   6  4  11
   *
   5 *  66  9      10      28      7231   5   3 32  9 400
   T*    4  1       1       2      0 15   0   0  2  1  27
   5*   16  2       2       7      2 58   1   1  8  2 100
   C*   33 10      22      12      6 70   5   8 23 11  27
   *
   4 *  50 17   2   7  18 81   4  72 55   3   2 20  7 336
   T*    3  1   0   0   1  5   0   5  4   0   0  1  0  22
```

```
   8 *  15  5   1   2   5 24   1  21 16   0   1  6  2 100
   C*   25 15   8  16  51 36   6  62 17   3   5 15  9  22
   *
   3 *  14  5       4   6 22   6   3  5   1   3  6  5  84
   T*    1  1       0   0  1  0   0  0  0   0  0  0   6
   8*   17 11       5   7 26   7   4  6   1   4  7  6 100
   C*    7 10       9  17 13 10   3  2   1   8  4  6   6
   *
   2 *      23          1          1  5              30
   T*       2           0          0  0               2
   8*      77          3          3 17             100
   C*      88          0          0  5               2
   *
   1 *  35 36   1  12   3 21 16   9 11   3   4  8  2 150
   T*    2  2   C   1   0  1  1   1  1   0   0  1  0  11
   8*   22 23   1   8   2 13  9   6  7   2   3  5  1 100
   C*   17 41  50  27   9  5 22   8   3  3 11   6  2  11
   *
  ***********************************************************
  (12)    1   3   5   7   9  11  13
  Q50C       2   4   6   8  10  12  14

COLUMN 200    26    45   226   116   108   137
TOTAL     88     2    35    53   332    37    81

PERCENT  13    2     3    15    8     7     9
TOTAL     6    0     2     4    22    2     5

GRAND TOTAL= 1496

CHI-SQUARE (OF TABLE)       2663.97222
DF=   104

VALUES NOT ENTERED   4
  CASE NO.      VARIABLE  8      VARIABLE
    120             0              7
    172             0             12
    187             0              7
    538             0             11

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).
```

(Question 56)
I. Production, Management and Social Sciences
   (32) Miscellaneous arts and sciences
   (23) Personnel and training
   (26) Production and management
   (28) Psychology and human engineering

II. Medical Sciences
   (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
   (11) Ground transportation equipment
   (13) Installations and constructions
   (18) Military sciences and operations
   (24) Photography and other reproduction processes
   (29) Quartermaster equipment and supplies
   (31) Ships and marine equipment
   (33) Transportation

IV. Aeronautics and Space Technology
   (01) Aircraft and flight equipment
   (12) Guided missiles
   (19) Navigation

V. Electronics and Electrical Engineering
   (05) Communications
   (06) Detection
   (07) Electrical equipment
   (08) Electronics, electronic equipment

VI. Chemical Science and Materials
   (03) Chemical warfare equipment and materials
   (04) Chemistry
   (10) Fuels and combustion
   (14) Materials (nonmetallic)
   (17) Metallurgy
   (22) Ordnance

VII. Physical Science
   (02) Astronomy, geophysics and geography
   (09) Fluid mechanics
   (20) Nuclear physics and nuclear chemistry
   (21) Nuclear propulsion
   (25) Physics
   (27) Propulsion systems

VIII. Research and Research Equipment
   (30) Research and research equipment

IX. Mathematics
   (15) Mathematics

Table 3-94.   (Continued)

```
CORRELATION COEFFICIENT   C.322C
MEANS 121=      7.55400   SCI 121=      2.98411
MEANS P3=       4.9220C   SDI P1=      1.99451
```

(Question 56C)

I   No Degree
     (00) No Degree
II. Behavioral and Social Sciences
     (01) Arts
     (17) Business and Business Administration
     (40) Economics
     (41) Education
     (01) English
     (01) General Studies
     (45) Geography
     (44) History
     (01) Journalism
     (01) Languages
     (43) Law
     (01) Library Science
     (06) Psychology   (01) Philosophy
     (46) Sociology   (42) Political Science
III. Biological and Medical Sciences
     (02) Biology
     (37) Dentistry
     (39) Medicine
     (35) Pharmacy
     (31) Physiology
     (39) Public Health
     (26) Zoology
IV. Agriculture and Agricultural Engineering
     (27) Agriculture and Agricultural Engineering
     and (34)
V.   General Engineering
     (07) Engineering Management
     (07) General Engineering
     (12) Industrial Engineering
     (24) Systems Engineering
VI. Civil Engineering
     (10) Civil Engineering
     (27) Architectural Engineering
     (15) Military Science
     (10) Naval Architectural Engineering

VII. Mechanical Engineering
           Mechanical Engineering
           Automotive Engineering
     (12. Engineering Mechanics
     (27) Maintenance Engineering
     .15) Marine Engineering
     (13) Mechanical Engineering
VIII. Chemical Engineering
     (09) Chemical Engineering
IX.   Aeronautical Engineering
     (29) Aeronautical Engineering
     (30) Aeronautics
     (08) Aerospace Engineering
X.   Electrical Engineering
     (11) Electrical Engineering
XI.   Chemistry
     (03) Chemistry
XII. Earth Science
     (23) Ceramic Engineering
     (33) Geology and Mineralogy
     (36) Geophysics
     (14) Metallurgy and Metallurgical Engineering
     (14) Mining Engineering
     (22) Petroleum Engineering
XIII. Physical Science
     (16) Applied Science
     (19) Engineering Science
     (16) General Science
     (32) Meteorology and Astronomy
     (05) Physics
XIV. Mathematical Science
     (04) Mathematical Science

```

Table 3-95. Type of Work Activity vs. User's Equivalent GS
Rating

C54    IS CROSS TABULATED WITH    C58    ...

VARIABLE  A IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     A      5      1
    11      13      1

| C58 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C54 | | | | (EXTREME RIGHT VALUE IS ROW TOTAL) | | | | | | | | |
| 5 • | 2 | 21 | 40 | 67 | 81 | 35 | 27 | 1 | 6 | 4 | 2 | 295 |
| 7• | 0 | 3 | 4 | 4 | 2 | 2 | 1 | 0 | 0 | 0 | | 20 |
| 9• | 1 | 9 | 17 | 21 | 21 | 12 | 9 | 5 | 2 | 1 | 1 | 100 |
| C• | 1 | 5 | 17 | 23 | 33 | 50 | 55 | 40 | 25 | 50 | 50 | 20 |
| 4 • | 1 | 6 | 7 | 5 | 5 | 1 | 3 | | | | | 28 |
| 7• | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 9 |
| 9• | 4 | 21 | 29 | 15 | 18 | 4 | 11 | | | | | 102 |
| C• | 4 | 2 | 7 | 2 | 2 | 1 | 4 | | | | | 2 |
| 3 • | 1 | 6 | 22 | 35 | 49 | 35 | 12 | 9 | 3 | 1 | | 171 |
| 7• | 0 | 0 | 1 | 2 | 7 | | 1 | 1 | 0 | 0 | | 11 |
| 9• | 1 | 4 | 13 | 20 | 23 | 19 | 7 | 5 | 2 | 1 | | 100 |
| C• | 4 | 2 | 4 | 3 | 17 | 18 | 17 | 18 | 12 | 13 | | 11 |
| 2 • | 30 | 105 | 106 | 105 | 153 | 79 | 15 | 9 | 7 | 3 | 1 | 2 | 223 |
| 7• | 1 | 17 | 17 | 11 | 10 | 5 | 1 | 1 | 0 | | 0 | 0 | 55 |
| 9• | 2 | 22 | 23 | 20 | 19 | 10 | 2 | 1 | 1 | | 0 | 0 | 100 |
| C• | 57 | 72 | 64 | 58 | 52 | 43 | 27 | 18 | 28 | 13 | 25 | 52 | 55 |
| 1 • | 10 | 59 | 47 | 31 | 26 | 10 | 1 | 4 | | | | 162 |
| 7• | 1 | 4 | 3 | 2 | 1 | 1 | 0 | 0 | | | | 12 |
| 9• | 5 | 37 | 26 | 17 | 11 | 5 | 1 | 2 | | | | 100 |
| C• | 36 | 23 | 17 | 11 | 7 | 5 | 1 | 8 | | | | 12 |

**************************************************
1111    2    4    6    8    10    12

(Question 54)
I.    (5)  Technical evaluation
II.   (4)  Scientific and Engineering (nonmanagement)
III.  (2)  Technical management
IV.   (1)  Administrative management
V.    (3)  Both administrative and technical management

(Question 58)
I.     (01)  GS-6 (under 6,000)
II.    (02)  GS-9 (6,000 - 7,999)
III.   (03)  GS-11 (9,000 - 10,245)
IV.    (04)  GS-12 (10,250 - 11,999)
V.     (05)  GS-13 (12,000 - 13,999)
VI.    (06)  GS-14 (14,000 - 16,499)
VII.   (07)  GS-15 (16,500 - 18,999)
VIII.  (08)  GS-16 (19,000 - 20,999)
IX.    (09)  GS-17 (21,000 - 23,999)
X.     (10)  GS-18 (24,000 - 25,999)
XI.    (11)  Sp A (27,000 - 29,999)
XII.   (12)  Sp B (30,000 - 34,999)
XIII.  (13)  Sp C (over 35,000)

| C58 | 3 | 5 | 7 | 9 | 11 | 13 |
|---|---|---|---|---|---|---|
| COLUMN | 28 | 285 | 294 | 70 | 25 | 5 |
| TOTAL | 266 | 285 | 184 | 45 | 8 | 4 |
| PERCENT | 2 | 19 | 20 | 4 | 2 | 0 |
| TOTAL | 17 | 19 | 12 | 3 | 1 | 0 |

GRAND TOTAL= 1499

CHI-SQUARE (FF TABLE)    165.77768
DF= 44

VALUES NOT ENTERED   1
  CASE NO.    VARIABLE  A    VARIABLE 11
   1044          0              5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE )

CORRELATION COEFFICIENT  0.4384
MEANS (11)=      5.37933    SD (11)=      1.88282
MEANS (A)=       2.61867    SD (A)=       1.30424

## Table 3-96. Field of Work Position vs. Kind of Work Position

(The table data is a degraded computer printout cross-tabulation and is largely illegible.)

(Question 56)

I.   Production, Management and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II.   Medical Sciences
- (16) Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV.   Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided missiles
- (19) Navigation

V.   Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI.   Chemical Sciences and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (10) Fuels and lubrication
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII.   Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII.   Research and Research Equipment
- (30) Research and research equipment

IX.   Mathematics
- (15) Mathematics

(Question 55)
| | | |
|---|---|---|
| I. | (00) | Research - basic |
| II. | (01) | Research - applied |
| III. | (11) | System analysis |
| IV | (02) | Development - advanced |
| V. | (04) | Development - engineering |
| VI | (05) | Development - operational system |
| VII. | (06) | R&D support |
| VIII. | (07) | Test or evaluation |
| IX. | (08) | Production processes |
| X. | (09) | Production end-items |
| XI. | (10) | Reliability or quality control |
| XII. | (12) | Customer relations |

GRAND TOTAL: 1455

CHI-SQUARE OF TABLE: 713.30665

†THE PERCENTAGE COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED EVEN IF THEY ARE EXCLUDED FROM THE ABOVE TABLE.

## Table 3-97. Kind of Work Position vs. User's Equivalent GS Rating

```
    055   IS CROSS TABULATED WITH   058   9R.

VARIABLE   9 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    9   12   1
    11   15   1

(9)   (EXTREME RIGHT VALUE IS ROW TOTAL)
055
   12 •   2 5 9 3   3 2 1 1   26
    T•   0 0 1 0   0 0 0 0   2
    R•   0 19 35 12   12 6 4 4   106
    C•   . 2 3 1   4 4 4 13   2
     •
   11 •   16 12 11 12   8 1 3   63
    T•   1 1 1 1 1   0 0   4
    R•   25 19 17 19 13   2 5   100
    C•   6 4 4 4 4   1 6   4
     •
   10 •   1 13 1C 9 8 2 1   42
    T•   0 1 1 1 1 0 0   3
    R•   2 26 24 21 19 5 2   165
    C•   4 4 3 3 3 1 1   3
     •
    9 •   4 15 19 14 7 4 4 1 1   69
    T•   0 1 1 1 0 0 0 0 0   5
    R•   6 22 28 20 10 6 6 1 1   100
    C•   14 6 7 5 2 2 6 2 4   5
     •
    8 •   6 40 27 26 16 7   1   123
    T•   0 3 2 2 1 0   0   8
    R•   5 33 22 21 13 6   1   100
    C•   21 16 9 7 5 4   4   8
     •
    7 •   7 34 40 18 23 13 6 4 2   4   151
    T•   0 2 3 1 2 1 0 0 0   0   13
```

```
    R•       5 23 26 12 15  9  ~  3  1    3       100
    C•      25 13 14  6  8  7  9  6  8   30        10
     •
    6 •      2 23 25 40 21 12  3  7  1           139
    T•      0  2  2  3  1  1  0  0  0             9
    R•      1 20 14 29 15  9  2  5  1           100
    C•      7 11  9 14  7  7  6 14  4             9
     •
    5 •      2 44 64 62 63 27 13  3  3  1       207
    T•      0  3  4  4  4  2  1  0  0  0        19
    R•      1 16 23 22 22 10  5  1  1  0       100
    C•      7 17 22 22 21 15 19  6 12 13        19
     •
    4 •     11 19 25 36 31 12  6  4  2  1       146
    T•      1  1  2  2  2  1  0  0  0  0        10
    R•      6 13 17 25 21  8  4  3  1  1       100
    C•      4  7  9 12 17 17 12 16 13 20        10
     •
    3 •      3 20 26 25 33 23  7  7  4  1       149
    T•      0  1  2  2  2  2  0  0  0  0        10
    R•      2 13 17 17 22 15  5  5  3  1       100
    C•     11  8  9  9 11 13 10 14 16 13        10
     •
    2 •      3 33 36  7 55 41 14 13  4  3    6   244
    T•      0  2  2  2  4  3  1  1  0  0    0    16
    R•      1 14 15 15 23 17  6  5  2  1    2   100
    C•     11 13 12 13 19 22 20 27 20 18  1C0    16
     •
    1 •      4  6 10 17 15  6  3  3  1           65
    T•      0  0  1  1  1  0  0  0  0            4
    R•      6  9 15 26 23  9  5  5  2          100
    C•      2  2  3  6  8  9  6 12 13            4
     •

  ••••••••••••••••••••••••••••••••••••••••••••••••
  (11)      2    4    6    8   10    12
  058         3    5    7    9   11   13

COLUMN  28    289    294    70    25    5
 TOTAL    258    286    183    49    8    6

PERCENT  2    19    20    5    2    0
 TOTAL    17    19    12    3    1    0
```

Table 3-98. Interviewer's Assessment of User's Information
Needs vs. Kind of Work Position

(Question 50)

I.	(1)	Insignificant need
II.	(2)	Moderate need
III.	(3)	Large need

(Question 55)

I.	(2)	Research - basic
II.	(1)	Research - applied
III.	(3)	System analysis
IV.	(2)	Development - advanced
V.	(4)	Development - engineering
VI.	(5)	Development - operational system
VII.	(6)	R&D support
VIII.	(7)	Test or evaluation
IX.	(8)	Production processes
X.	(9)	Production and items
XI.	(10)	Reliability or quality control
XII.	(12)	Customer relations

Table 3-99. Field of Work Position vs. User's Equivalent GS Rating

Q56   IS CROSS TABULATED WITH   Q59   9R,

VARIABLE 10 IS CROSS TABULATED WITH VARIABLE 11

NUMBER OF REPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
10	9	1
11	13	1

(10)   (EXTREME RIGHT VALUE IS ROW TOTAL)
256

9 •	7	4	3	6	3	1	1	2		27
T•	0	0	0	0	0	0	0	0		2
R•	26	15	11	22	11	4	4	7		100
C•	3	1	1	2	2	1	2	8		2
8 •	2	27	28	22	13	9	7	3	2	1	114
T•	0	2	2	1	1	1	0	0	0		8
R•	2	24	25	19	11	8	6	3	2	1	100
C•	7	10	10	8	9	5	10	6	8	13	8
7 •	2	29	26	47	38	25	7	8	5		187
T•	0	2	2	3	3	2	0	1	0		13
R•	1	16	14	25	20	13	4	4	3		100
C•	7	11	9	17	13	14	10	16	27		13
6 •	1	21	18	51	39	27	9	9	3	2	159
T•	0	1	1	2	3	2	1	1	0	0	11
R•	1	13	11	19	24	17	6	6	2	1	100
C•	4	8	6	11	13	15	13	18	12	25	11
5 •	13	79	90	75	79	41	12	7	4		400
T•	1	5	6	5	5	3	1	0	0		27
R•	3	20	22	19	20	10	3	2	1		100
C•	46	31	31	26	27	22	17	14	16		27
4 •	4	53	60	58	83	51	19	7	2	2	336
T•	0	4	4	4	5	3	1	0	2	6	22

R•	1	16	18	17	24	15	6	2	1	1	100
C•	14	21	21	20	27	28	28	14	8	25	22
3 •	3	12	22	14	9	9	4	5	5	1	84
T•	0	1	1	1	1	1	0	0	0	0	6
R•	4	14	26	17	11	11	5	6	6	1	100
C•	11	5	8	5	3	5	6	10	20	20	6
2 •		1	5	3	8	4	1		1	3	4	30
T•		0	0	0	1	0	0		0	0	0	2
R•		3	17	10	27	13	3		3	10	13	100
C•		0	2	1	3	2	1		13	60	100	2
1 •	3	29	36	31	22	15	9	9	2	2	1	159
T•	0	2	2	2	1	1	1	1	0	0	0	11
R•	2	18	23	19	14	9	6	6	1	1	1	100
C•	11	11	12	11	8	8	13	18	8	25	20	11

•••

(11)	2		4		6		8		10		12	
U58		3		5		7		9		11		13

COLUMN	28	287	293	69	25	5
TOTAL	258	284	184	49	9	4

PERCENT	2	19	20	5	2	0
TOTAL	17	19	12	3	1	0

GRAND TOTAL= 1496

CHI-SQUARE OF TABLE   403.33251
DF= 88

VALUES NOT ENTERED   4
CASE NO.	VARIABLE 10	VARIABLE 11
120	0	5
122	0	6
197	0	4
518	0	8

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

(Question 56)
I. Production, Management and Social Sciences
   (32) Miscellaneous arts and sciences
   (23) Personnel and training
   (26) Production and management
   (28) Psychology and human engineering

II. Medical Sciences
   (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
   (11) Ground transportation equipment
   (13) Installations and constructions
   (18) Military sciences and operations
   (24) Photography and other reproduction processes
   (29) Quartermaster equipment and supplies
   (31) Ships and marine equipment
   (33) Transportation

IV. Aeronautics and Space Technology
   (01) Aircraft and flight equipment
   (12) Guided missiles
   (19) Navigation

V. Electronics and Electrical Engineering
   (05) Communications
   (06) Detection
   (07) Electrical equipment
   (08) Electronics, electronic equipment

VI. Chemical Science and Materials
   (03) Chemical warfare equipment and materials
   (04) Chemistry
   (10) Fuels and combustion
   (14) Materials (nonmetallic)
   (17) Metallurgy
   (22) Ordnance

VII. Physical Science
   (02) Astronomy, geophysics and geography
   (09) Fluid mechanics
   (20) Nuclear physics and nuclear chemistry
   (21) Nuclear propulsion
   (25) Physics
   (27) Propulsion systems

VIII. Research and Research Equipment
   (30) Research and research equipment

IX. Mathematics
   (15) Mathematics

(Question 58)
I	(01)	GS-((under 6,000)
II	(02)	GS-((6,000 - 7,599)
III.	(03)	GS-11 (8,000 - 10,249)
IV	(04)	GS-12 (10,250 - 11,999)
V	(05)	GS-13 (12,000 - 13,999)
VI	(06)	GS-14 (14,000 - 16,499)
VII	(07)	GS-15 (16,500 - 18,999)
VIII	(08)	GS-16 (19,000 - 20,999)
IX	(09)	GS-17 (21,000 - 23,999)
X	(10)	GS-18 (24,000 - 26,999)
XI.	(11)	Sp A (27,000 - 29,999)
XII.	(12)	Sp B (30,000 - 34,999)
XIII.	(13)	Sp C (over 35,000)

CORRELATION COEFFICIENT -0.0383
MEAN(11)=   5.27933   SD(11)=   1.88282
MEAN(10)=   4.87200   SD(10)=   1.98451

Table 3-100. Interviewer's Assessment of User's Information
Needs vs. Field of Work Position

```
_____ C55    IS CROSS TABULATED WITH    C56    CR.

VARIABLE 13 IS CROSS TABULATED WITH VARIABLE  8

NUMBER OF APPLICATIONS= 1500

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     13       3       1
      8       5       1


(13)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
C59
     3 *    5 25 16 54 115 55 29 23 13   480
    T*      3  2  1  6  8  4  5  2  1    32
    P*     10  5  4 20 25 12 16  5  3   100
    C*     31 83 21 28 30 37 42 20 48    32
     *
     2 *   48  3 42 187 199 80 86 51 11  727
    T*      5  0  3 13 13  5  6  3  1    49
    P*      5  0  6 26 27 11 12  7  2   100
    C*     43 10 53 56 56 55 46 45 41    49
     *
     1 *   41  2 24 55 82 20 22 40  3   289
    T*      3  0  2  4  5  1  1  3  0    19
    P*     14  1  4 19 28  7  8 14  1   100
    C*     26  7 29 16 20 13 12 35 11    19
     *
    **********************************
    ( 8)    1   2   4   6   7   8   9
    C56     2   4   6   8

    COLUMN 155    84  40  187  27
    TOTAL    30   436  150  114

    PERCENT  11   6   27  13   2
    TOTAL     2   22  11    8

    GRAND TOTAL =  1456


CHI-SQUARE (OF TABLE)        95.75375
DF=   16

VALUES NOT ENTERED    4
    CAS N       VARIABLE 13     VARIABLE  8
                     1              0
                     3              0
                     4              0
                     2              0

IF FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
IF N IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.

CORRELATION COEFFICIENT   0.0167
MEA ( 8)=      4.8220   SD( 8) =      1.98451
MEAN( 13)=     2.1906   SD( 13) =     0.70613
```

(Question 59)
I.   (3)   Insignificant need
II.   (2)   Moderate need
III.   (1)   Large need

(Question 56)
I.   Production, Management and Social Sciences
    (12)   Miscellaneous arts and sciences
    (23)   Personnel and training
    (26)   Production and management
    (28)   Psychology and human engineering

II.   Medical Sciences
    (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
    (11)   Ground transportation equipment
    (13)   Installations and constructions
    (18)   Military sciences and operations
    (24)   Photography and other reproduction processes
    (29)   Quartermaster equipment and supplies
    (31)   Ships and marine equipment
    (33)   Transportation

IV.   Aeronautics and Space Technology
    (01)   Aircraft and flight equipment
    (12)   Guided missiles
    (19)   Navigation

V.   Electronics and Electrical Engineering
    (05)   Communications
    (06)   Detection
    (07)   Electrical equipment
    (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
    (03)   Chemical warfare equipment and materials
    (04)   Chemistry
    (10)   Fuels and combustion
    (14)   Materials (nonmetallic)
    (17)   Metallurgy
    (22)   Ordnance

VII.   Physical Science
    (02)   Astronomy, geophysics and geography
    (09)   Fluid mechanics
    (20)   Nuclear physics and nuclear chemistry
    (21)   Nuclear propulsion
    (25)   Physics
    (27)   Propulsion systems

VIII.   Research and Research Equipment
    (30)   Research and research equipment

IX.   Mathematics
    (15)   Mathematics

Table 3-101. Interviewer's Assessment of Difficulty in Acquisition
of Information vs. Interviewer's Assessment of
Difficulty in Use of Information

Q62   IS CROSS TABULATED WITH   Q61   CR,

VARIABLE 11 IS CROSS TABULATED WITH VARIABLE 13

NUMBER OF APPLICATIONS= 1*CU

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
11   3   1
1C   4   1

(11)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q62
  3 •   2 S154 72   237   (Question 62)
  T•   C 1 1C   5   16   I   (1) Quite clear or obvious
  R•   1 4 65 3C 10C   II   (2) Fairly clear or obvious
  C•   1 5 16 65   16   III. (3) Neither clear nor obvious

  2 • 611C4575 25 765   (Question 61)
  T•   4 7 38 2   51   I   (1) Obvious or prescribed
  P•   8 14 75 3 1CC   II. (2) Entirely or largely independent of professional judgment
  C• 25 58 55 24   51   III. (3) Entirely or largely dependent upon professional judgment
                              IV   (4) Difficult, because methods and procedures were lacking
  1 • 181 66244 7 456
  T• 12 4 16   C   33
  P• 36 13 45   1 1CC
  C• 74 37 25   7   33
  ••••••••••••••••••••
 (10)   1   3
Q61   2   4

CCLUMN 244   573
 TOTAL   179   1C4

PERCENT 16   65
 TOTAL   12   7

GRAND TOTAL= 15CU

CHI-SQUARE (CF TABLE)   462.5912C
DF=   6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   .4455
MEAN(1^)=   2.62467   SC(10)=   C.93602
MEAN(11)=   1.62600   SC(11)=   C.67826

3.3 DISTRIBUTIONS (Continued)

USER, TASK, UTILIZATION,
and SEARCH AND ACQUISITION Questions

Table 3-102. Location of First Source for Information vs. Elapsed Time on Task

```
  C14    IS CROSS TABULATED WITH    Q?     QR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER CF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED
   2      18      1
   1       9      1


( 2)                  ( XTREME RIGHT VALUE IS ROW TOTAL)
Q14
 15 •     4     4     2    15    10    12     8     P     3   100
  T•      0     0     0     0     1     0     0     0     0     2
  P•      4     4     2    15    16    11     8     8     3   100
  C•      1     2     0     3     3     2     2     2     1     2
    •
 14 •           5    11     3     6     7     5     9     6    67
  T•           0     0     0     0     0     0     0     0     1
  P•           4    16     4    13    12     7    13     9   100
  C•           1     2     1     1     1     2     2     2     1
    •
 13 •     1           4          13    17     5     4     3    46
  T•      0     0     0           0     0     0     0     0     1
  P•      2     2     0          24    17    11     9     7   100
  C•      0     0     1           1     2     2     1     1     1
    •
 12 •     2                      15     6     2     5          31
  T•      0                       0     0     0     0           1
  P•      6     4                 8    19     6    16         100
  C•      0                       1     1     1     1           1
    •
 11 •     9    13    16    45    65    72    71    31    20   320
  T•      0     0     0     1     2     2     2     0     0     6
  P•      3     4     5    14    20    22     7    10     6   100
  C•      2     3     4     8     8     8     7     4     8     6
    •
 10 •    42    11    23    49   156    90    18    46    35   495
  T•      1     0     0     1     3     2     1     1     1     9
  P•     11     2     4    10    27    18     8     8     7   100
  C•      9     9     6     9     9     9     9    10    14     9
```

```
  9 •    36    10    63    35   168    75     7    24    27   507
  T•      1     1     1     1     3     1     1     0     1     9
  R•      8          12     7    33    15     7     5     5   100
  C•      7    11    14     6    11     8    11     6    11     9
    •
  8 •    28    10    29    30    93    95    16    26     6   297
  T•      1     0     1     1     2     2     0     1     0     6
  P•      9     4    10    10    31    19     5     9     2   100
  C•      6     4     6     6     5     5     3     7     2     6
    •
  7 •    10     6     6     6    33     9     3     5     4    72
  T•      0     0     0     0     1     0     0     0     0     1
  R•     14     8     9     8    45    13     4     7     6   100
  C•      2     2     1     1     5     1     1     1     2     1
    •
  6 •    45    47    78    77   235     7     4    48    22   769
  T•      1     1     1     1     4     0     0     1     0    14
  P•      8     7    10    10    31     1     1     6     3   100
  C•     11    17    17    14    15     1    13    12     9    14
    •
  5 •    33    15    72    18    55    42    16    28    11   236
  T•      1     0     0     0     1     1     0     0     0     4
  P•     14     6     9     8    23    18     7    11     5   100
  C•      8     4     6     3     4     4     4     6     4     4
    •
  4 •    17    11     6     7    44     5    15    17    11   136
  T•      0     0     0     0     1     0     0     0     0     3
  P•      7     8     4     5    32     4    11    13     8   100
  C•      2     4     1     1     2     1    11     4     4     3
    •
  3 •    64    45    70    80   215   115    33    30    35   656
  T•      1     1     1     2     4     2     1     1     1    13
  P•      9     7    10    13    32    16     5     4     5   100
  C•     11    16    15    17    14    12    12     8    14    13
    •
  2 •   164    76    72    91   251   172    74    49    42  1009
  T•      3     1     1     2     5     3     1     1     1    19
  R•     16     7     7     9    25    17     7     5     4   100
  C•     29    27    16    17    16    18    23    18    17    19
```

Table 3-102. (Continued)

```
 1 •    9'    ,·    53    74   143    96    18    44    22   576
 1•     2     1     1     1     2     2     0     1     0    11

 9•     14    6     5     13    25    17    3     8     4    172
 76     14    9     12    14    9     13    6     11    9    11

•••••••••••••••••••••••••••••••••••••••••••••
 ( 11     1         3          5         7         9
 2?              2         4         6         8

CCLUM'   574   5    447    1526     322      747
 TOTAL         169     539     959     397

PERCENT   11        9         29        6         5
 TOTAL         8         10        18        7

GRAND TOTAL= 5357
```

CHI-SQUARE (CF TABLE)   337.47723
DF= 112

VALUES NOT ENTERED   2
  CASE NO.   VARIABLE 2   VARIABLE 1
   1303   0   5
   4395   0   5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.1.60
MEAN(1)=   4.90649   SD(1)=   2.12331
MEAN(2)=   5.66169   SD(2)=   1.73906

(Question 14)
I.   (01) Received with task assignment
II.   (04) Recalled it
III.   (09) Searched own collection
IV.   (19) Respondent's action
V.   (03) Assigned subordinate to get it
VI.   (05) Asked a colleague
VII.   (02) Asked my supervisor
VIII.   (08) Requested search of department files
IX.   (06) Asked an internal company consultant
X.   (10) Searched company TIC
X.   (7)   Requested library search
XI.   (15) Requested data from manufacturer, vendor, or supplier
XII.   (14) Searched manufacturer, vendor or supplier sources
XII   (11) Searched an outside library
XIII.   (18) Asked an external consultant or expert
XIV.   (13) Requested search of DOD information/data center
XIV.   (12) Searched DOD information/data center
XV.   (17) Asked customer

(Question 3)
I   (1)   1 - 7 days
II.   (2)   8 - 14 days
III.   (3)   15 - 21 days
IV.   (4)   22 - 30 days
V.   (5)   31 - 90 days
VI   (6)   91 - 180 days
VII.   (7)   181 - 270 days
VIII.   (8)   271 - 365 days
IX.   (9)   More than 365 days

Table 3-103. Desired Detail of Transporting Medium vs. Elapsed Time on Task

(Question 25)

I.	(1)	A once over lightly
II.	(0)	A specified answer
III.	(2)	A detailed analysis

(Question 3)

I.	(1)	1 – 7 days
II.	(2)	8 – 14 days
III.	(3)	15 – 21 days
IV.	(4)	22 – 30 days
V.	(5)	31 – 90 days
VI.	(6)	91 – 180 days
VII.	(7)	181 – 270 days
VIII.	(8)	271 – 365 days
IX.	(9)	More than 365 days

Table 3-104. Class of Information vs. Elapsed Time on Task

```
..._ Q2P ____ IS CROSS TABULATED WITH ____ Q3 ___ Q8,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  3

NUMBER OF REPLICATIONS= 4369

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      14      1
    1       9      1


(  2)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q2P
  14 •   12    1C   1P   13   47   32    5   12   11  160
   T•    C     3    6    0    1    1    2    C    0    3
   P•    7     6   11    8   29   20    3    7    7  100
   C•    2     1    4    4    3    1    2    3    4    3
     •
  13 •   15   13   17   18   57   26   13    P   12  189
   T•    C    3    0    C    1    0    C    C    0    4
   P•   13    7    9   1C   30   14    7    4    6  100
   C•    4    4    4    3    4    4    4    2    5    4
     •
  12 •   37   23   24   17   37   65   29   25   24  320
   T•    1    0    C    C    2    1    0    1    0    4
   P•   1.   7    8    5   27   20    6    9    7  100
   C•    6    7    6    3    6    7    6    7   10    6
     •
  11 •   22   18   33   15   60   44   14   42    6  224
   T•    C    0    1    C    1    1    2    C    C    4
   P•   10    8   15    7   27   20    6    5    3  100
   C•    4    5    7    3    4    5    4    3    2    4
     •
  10 •  121   78  116  132  414  264   63  193   53 1349
   T•    2    1    2    2    8    5    1    2    1   25
   P•    5    6    9   10   31   20    5    8    4  100
   C•   21   23   25   24   37   28   20   28   21   25
     •
   9 •   91   59   76   48  254  117   44   5C   35  813
   T•    2    1    1    2    5    2    1    1    1   15
   P•   11    7    C   13   31   14    5    6    4  100
   C•   16   13   16   16   17   12   14   13   14   15


   8 •   26   16   16   21   50   31    9   13    7  189
   T•    C    0    0    0    1    1    0    C    0    4
   P•   14    8    8   11   26   16    5    7    4  100
   C•    5    5    4    4    3    3    3    3    3    4
     •
   7 •   41   26   14   24   69   32   17    6    6  235
   T•    1    C    C    C    1    1    0    C    0    4
   R•   17   11    6   10   29   14    7    3    3  100
   C•    7    7    3    4    5    3    5    2    2    4
     •
   6 •   12   16   13   10   49   31   23   14   13  187
   T•    C    0    C    0    1    1    0    0    0    3
   P•    6    9    7    9   26   17   12    7    7  100
   C•    2    5    3    3    3    4    7    4    5    3
     •
   5 •   72   77   49   40  144   97   37   41   20  547
   T•    1    1    1    1    3    2    1    1    C    9
   P•   13    8    9   11   26   18    7    7    4  100
   C•   13    8   11   11    9   10   11   11    8   10
     •
   4 •   38   22   27   46  132   85   25   24   22  427
   T•    1    0    1    1    2    2    C    C    0    7
   P•   10    6    7   12   26   22    6    6    5  100
   C•    7    6    6    9    7    9    7    6    8    7
     •
   3 •   43   22   26   48   96   60   28   31   19  372
   T•    1    0    C    1    2    1    1    1    0    7
   P•   12    6    7   13   26   16    8    8    5  100
   C•    7    6    6    9    6    6    9    7    7    7
     •
   2 •   74   18   24   41   99   74   26   39   22  378
   T•    1    0    3    1    2    1    0    1    0    7
   P•    9    5    7   11   26   20    7   10    6  100
   C•    4    5    5    8    6    8    8   10    9    7
     •
  *****************************************************
  ( 1)    1     3     3     4     5     6     7     8     9
  Q3
  COLUMN   574       455       1528       322       247
  TOTAL        348       530        958        387
  PERCENT   11        P         29         6          5
  TOTAL         6         10        18         7
```

(Question 29)
II.	(1)	Concepts
III	(8)	Raw data
IV	(5)	Math aids and formulae computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII	(11)	Test processes and procedures
VIII	(13)	Evaluation
IX.	(9)	Specifications
X	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII	(12)	Utilization
XIV.	(2)	Cost and funding administrative action

(Question 3)
I	(1)	1 – 7 days
II	(2)	8 – 14 days
III	(3)	15 – 21 days
IV	(4)	22 – 30 days
V	(5)	31 – 90 days
VI	(6)	91 – 180 days
VII	(7)	181 – 270 days
VIII	(8)	271 – 365 days
IX.	(9)	More than 365 days

Table 3-104. (Continued)

```
TRANSFER TABLE - AREA

CHI-SQUARE (FOR TABLE)        144.94425
DF =    64

VALUES OF F EXCEEDED    1
   CASE #  .    VARIABLE  2    VARIABLE  1
      4427           0            4

(THE FOLLOWING STATISTICS ARE BASED ON ALL DATA AS ENTERED
EVEN IF THE ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0104A
MEAN(  1)=         4.40445    SD(  1)=       2.12331
MEAN(  2)=         7.9 738    SD(  2)=       3.3174A
```

Table 3-105. Desired Class of Information vs. Type of Task Output

```
    Q16    IS CR IS TABULATED WITH    Q5    70.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 53.0

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2      14      1
    1       7      1
```

(2°			(EXTREME RIGHT VALUE IS ROW TOTAL)				
Q16							
14 •	21	62	48	49	112	21	115	427
T•	0	1	1	1	3	0	3	10
R•	5	15	11	11	26	5	27	100
C•	4	8	6	9	11	14	18	10
13 •	9	50	33	15	44	5	31	187
T•	0	1	1	0	1	0	1	4
R•	5	27	18	8	24	3	17	100
C•	4	7	4	3	4	3	5	4
12 •	26	95	79	86	144	17	73	519
T•	1	2	2	2	3	0	2	12
R•	5	18	15	17	28	3	14	100
C•	10	12	9	16	14	11	12	12
11 •	4	4	25	12	36		25	106
T•	0	0	1	0	1		1	3
R•	4	4	24	11	34		24	100
C•	2	1	3	2	3		4	3
10 •	76	230	254	168	297	46	152	1223
T•	2	5	6	4	7	1	4	29
R•	6	19	21	14	24	4	12	100
C•	30	30	30	31	29	31	24	29
9 •	36	67	137	42	100	24	83	489
T•	1	2	3	1	2	1	2	12
R•	7	14	28	9	20	5	17	100
C•	14	9	16	3	10	16	13	12
8 •	11	30	32	33	55	8	16	186
T•	0	1	1	1	1	0	0	4
R•	6	16	17	18	30	4	9	100
C•	4	4	4	6	5	5	3	4
7 •	13	31	19	24	50	2	20	159
T•	0	1	0	1	1	0	0	4
R•	8	19	12	15	31	1	13	100
C•	5	4	2	4	5	1	3	4
6 •	4	6	1	10	7		8	36
T•	0	0	0	0	0		0	1
R•	11	17	3	28	19		22	100
C•	2	1	0	2	1		1	1
5 •	39	76	146	26	96	15	50	448
T•	1	2	3	1	2	0	1	11
R•	9	17	33	6	21	3	11	100
C•	15	10	17	5	9	10	8	11
4 •	5	36	18	40	33	5	31	165
T•	0	1	0	1	1	0	1	4
R•	3	22	11	24	20	3	19	100
C•	2	5	2	7	3	3	5	4
3 •	1	20	3	11	9	2	9	55
T•	0	0	0	0	0	0	0	1
R•	2	36	5	20	16	4	16	100
C•	0	3	0	2	1	1	1	1
2 •	1	6	11	6	17	1	5	47
T•	0	0	0	0	0	0	0	1
R•	2	13	23	13	36	2	11	100
C•	0	1	1	1	2	1	1	1
1 •	9	50	36	27	40	2	14	178
T•	0	1	1	1	1	0	0	4
R•	5	28	20	15	22	1	8	100
C•	4	7	4	5	4	1	2	4

```
( 1)        1        2        3        4        6        7
Q5

COLUMN   255     841    1038    631
TOTAL        763     548     148

PERCENT   6      20      25       5
TOTAL        18      13       4
```

(Question 16)

I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Methods aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII	(10)	Technical status
XIII	(12)	Utilization
XIV	(2)	Cost and funding administrative action

(Question 5)

I.	(7)	Hardware
II.	(1)	Technical data or information
III.	(6)	A design (includes specifications)
IV	(2)	A finding
V.	(3)	A recommendation
VI	(4)	A decision
VII	(5)	A plan

```
GRAND TOTAL= 4225

CHI-SQUARE (DF TABLE)          348.20617
DF=  78

VALUES NOT ENTERED=134

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0511
MEAN( 1)=       4.01661    SD( 1)=      1.79405
MEAN( 2)=       7.21739    SD( 2)=      4.77774
```

Table 3-106. Desired Volume of Transporting Medium vs. Type of Task Output

```
Q22    IS CROSS TABULATED WITH    G    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5462

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2       4       1
   1       7       1
```

(2) Q22	1	2	3	4	5	6	7	TOTAL		(Question 22)		
										I	(4)	All from recall
4 •	115	467	464	223	505	63	335	2148		II	(1)	One report or document
T•			6	6	•	•	1	7	41	III	(2)	A sampling of the reports and documents available
P•	4	24	21	10	29	1	17	100		IV	(3)	All the reports and documents that could be found
C•	37	44	44	40	14	33	44	41				pertinent to the question
•										(Question 1)		
3 •	63	127	220	137	346	50	142	1153		I	(7)	Hardware
T•	1		6	6	7	1	1	42		II	(1)	Technical data or information
P•	4	11	20	17	30	4	12	100		III	(6)	A design, include specifications
C•	20	16	20	4	25	20	13	42		IV	(2)	A finding
•										V	(3)	A recommendation
2 •	112	766	933	343	353	64	249	1520		VI	(6)	A decision
T•	2	5	9	•	7	1	2	40		VII	(5)	A plan
P•	7	16	10	17	32	4	15	160				
C•	52	27	51	35	27	33	31	70				
•												
1 •	23	111	45	16	49	13	46	371				
T•	0	3	0	2	2	0	1	7				
P•	6	30	12	5	27	4	12	100				
C•	7	11	4	5	4	7	6	7				

```
••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)    1       2       5       7
Q5            4       6       4

COLUMN  312         105.        1311        796
TOTAL        4         47         154

PERCENT              1           24          14
TOTAL        6         17         3
```

```
GRAND TOTAL=  5 2

CHI-SQUARE OF TABLE 1         169.47449
DF=  18

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME CELL EXCLUDED FROM THE ABOVE TABLES.

CORRELATION COEFFICIENT  (xy)=
YRATE  (X)=          R= 7 3   SEE (X)=         1.78617
Y AND  (Y)=          R= 2   SEE (Y)=         3.99547
```

Table 3-107. Desired Detail of Transporting Medium vs. Type of Task Output

```
  425    IS CROSS TABULATED WITH      45     DA.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS = 5344

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   .        5        1
   1        7        1


( 2)             (EXTREME RIGHT VALUE IS ROW TOTAL)
425
   3 .    114   325   366   266   517    78    513  1963     Question 25:
    T.      2     6     7     5    13     1      6    37       I.    (1)  A once-over lightly
    R.      6    17    19    13    20     4     16   100       II.   (2)  A specified answer
    C.     36    34    35    35    40    40     39    37       III.  (3)  A detailed analysis

   2 .    162   595   629   591   685   106    416  2941     Question 5:
    T.      3    11    12     .    13     2      8    56       I.    (1)  Hardware
    R.      5    20    21    13    23     4     16   100       II.   (2)  Technical data or information
    C.     52    64    59    57    52    55     52    56       III.  (3)  A design (includes specifications)
                                                              IV.   (2)  A finding
   1 .     37    49    65    51   465    10     69   390       V.    (3)  A recommendation
    T.      1     1     1     .     2     0      1     7       VI.   (4)  A decision
    R.      9    13    17    14    27     3     18   100       VII.  (5)  A plan
    C.     12     5     6     6     7     5      9     7

         ................................................
   ( 1)     1           3         5          7
   Q5              2         4          6

  COLUMN   313         1562       1512      796
  TOTAL           969        678        194

  PERCENT    5          19         24        14
  TOTAL          18         13         3

  GRAND TOTAL = 5344

  CHI-SQUARE FOR TABLE:       44.0945
  DF=   12
```

THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.

```
CORRELATION COEFFICIENT  0.0
MEANS  1)=      4.0.78:   SD  1)=    1.78389
MEANS  2)=      2.29434   SD  2)=    0.59475
```

Table 3-108. Desired Layout of Transporting Medium vs. Type of
Task Output

Q27   IS CROSS TABULATED WITH   C5   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5315

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
```
    2     17       1
    1      7       1
```

```
( 2)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q27
 17 •    6    6    4    2    8    1    4   31
 T•      0    0    0    0    0    0    0    1
 R•     19   19   13    6   26    3   13  100
 C•      2    1    0    0    1    1    1    1
   •
 16 •    3    1    3    1    2             10
 T•      0    0    0    0    0              0
 R•     30   10   30   10   20            100
 C•      1    0    0    0    0              0
   •
 15 •         1    3    3              3   10
 T•           0    0    0              0    0
 R•          10   30   30             30  100
 C•           0    0    0              0    0
   •
 14 •   16   50   78   44  102    3   45  338
 T•      0    1    1    1    2    0    1    6
 R•      5   15   23   13   30    1   13  100
 C•           5    7    6    8    2    6    6
   •
 13 •    6    9   15   36   38    8   18  130
 T•      0    0    0    1    1    0    0    2
 R•      5    7   12   28   29    6   14  100
 C•      2    1    1    5    3    4    2    2
   •
 12 •   30   54   69   49  113   19   59  393
 T•      1    1    1    1    2    0    1    7
 R•      8   14   18   12   29    5   15  100
 C•     10    6    7    7    9   10    7    7
```

```
 11 •   95  303  347  202  396   53  234 1630
 T•      2    6    7    4    7    1    4   31
 R•      6   19   21   12   24    3   14  100
 C•     31   31   33   29   30   27   24   31
   •
 10 •    8    9   10    5   25    3    9   69
 T•      0    0    0    0    0    0    0    1
 R•     12   13   14    7   36    4   13  100
 C•      3    1    1    1    2    2    1    1
   •
  9 •   12   18   35   26   25    9   23  148
 T•      0    0    1    0    0    0    0    3
 R•      8   12   24   18   17    6   16  100
 C•      4    2    3    4    2    5    3    3
   •
  8 •    2   16    7   14    7        12   59
 T•      0    0    0    0    0         0    1
 R•      5   27   12   24   12        20  100
 C•      1    2    1    4    1         2    1
   •
  7 •   33  126  150   65  180   14  137  730
 T•      1    2    3    2    4    0    3   14
 R•      5   17   21   12   25    3   19  100
 C•     11   13   14   12   14   10   17   14
   •
  6 •   16  100   76   81  144   18   74  477
 T•      0    2    1    2    3    0    1    9
 R•      4   21   16   17   33    4   15  100
 C•      5   10    7   12    9    9    9    9
   •
  5 •   24   92  131   55   70   23   55  466
 T•      0    2    2    1    2    0    1    9
 R•      5   20   28   11   13    5   11  100
 C•      8   10   12    8    7   12    7    9
   •
  4 •         1    4         4         2   11
 T•           0    0         0         0    0
 R•           9   36        36        18  100
 C•           0    0         0         0    0
```

```
  3 •   10   22   24   14   38    9   22  139
 T•      0    0    0    0    1    0    0    3
 R•      7   16   17   10   27    6   16  100
 C•      3    2    2    2    3    5    3    3
   •
  2 •   10    9   14    9   18   10   10   80
 T•      0    0    0    0    0    0    0    2
 R•     13   11   18   11   23   13   13  100
 C•      3    1    1    1    1    5    1    2
   •
  1 •   36  148   90   68  148   19   89  598
 T•      1    3    2    1    3    0    2   11
 R•      6   25   15   11   25    3   15  100
 C•     12   15    8   10   11   10   11   11
```
••

```
( 1)        1         3         5        7
Q5          2         4         6

COLUMN    308       1060      1306      794
TOTAL          965       692       194

PERCENT    5        19        24        14
TOTAL          18        13         3
```

GRAND TOTAL= 5319

CHI-SQUARE (OF TABLE)   265.38402
DF=   96

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0133
MEAN(1)=   4.03046   SD(1)=   1.78746
MEAN(2)=   8.28715   SD(2)=   3.94476

Table 3-109. Class of Information vs. Type of Task Output

Q28   IS CROSS TABULATED WITH   Q5   Q2,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= =355

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2   14   1
   1   7   1

(2)			(EXTREME RIGHT VALUE IS ROW TOTAL)				
Q28								
14 •	9	18	13	18	~2	5	44	159
T•	0	C	C	0	1	0	1	3
R•	6	11	8	11	33	3	28	100
C•	3	2	1	3	4	3	6	3
13 •	F	43	23	26	42	12	34	188
T•	0	1	0	C	1	0	1	4
R•	4	23	12	14	22	6	18	100
C•	3	4	2	4	3	6	4	4
12 •	24	60	41	46	92	9	52	324
T•	0	1	1	1	2	0	1	6
P•	7	19	13	14	28	3	16	100
C•	8	6	4	7	7	5	7	6
11 •	14	75	52	26	56	9	42	224
T•	0	0	1	0	1	0	1	4
R•	6	11	23	12	25	4	19	100
C•	4	3	5	4	4	5	5	.
10 •	74	213	279	165	376	47	190	1348
T•	1	4	5	3	7	1	4	25
P•	5	16	21	13	28	3	14	100
C•	24	22	26	24	29	24	24	25
9 •	65	129	215	2	175	27	129	811
T•	1	2	4	1	3	1	2	15
P•	8	16	27	9	22	3	16	100
C•	21	13	20	10	13	14	16	15
8 •	4	37	24	40	54	6	24	189
T•	C	1	C	1	1	0	0	4
R•	2	20	13	21	29	3	13	100
C•	1	4	2	6	4	3	3	4
7 •	13	51	30	36	60	5	39	234
T•	0	1	1	1	1	0	1	4
P•	6	22	13	15	26	2	16	100
C•	4	5	3	5	5	3	5	4
6 •	8	50	25	37	41	8	16	165
T•	0	1	0	1	1	0	0	3
P•	4	27	14	20	22	4	9	100
C•	3	5	2	5	3	4	2	3
5 •	42	74	198	33	113	21	61	547
T•	1	1	4	1	2	0	1	10
P•	5	14	36	6	21	4	11	100
C•	16	8	19	5	9	11	8	10
4 •	7	114	35	73	66	17	61	387
T•	0	2	1	1	1	0	1	7
P•	2	29	10	19	20	4	16	100
C•	2	12	4	11	6	9	8	7
3 •	18	90	49	57	98	12	54	369
T•	0	2	1	1	2	0	1	7
R•	5	24	13	15	2	3	15	100
C•	6	9	1	8	7	6	7	7
2 •	22	66	75	65	46	16	48	378
T•	0	1	1	1	2	0	1	7
P•	6	17	20	17	13	4	13	100
C•	7	7	7	9	7	8	6	7
(1)	1		3		5		7	
Q5		2		4		6		
COLUMN TOTAL	313	965	1062	698	1311	194	796	
PERCENT TOTAL	6	18	20	13	25	4	15	

(Question 28)
II	(1)	Concepts
III	(8)	Raw data
IV	(5)	Math aids and formulae, computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII	(12)	Utilization
XIV	(2)	Cost and funding, administrative action

(Question 5)
I	(7)	Hardware
II	(1)	Technical data or information
III	(6)	A design (includes specifications)
IV.	(2)	A finding
V	(3)	A recommendation
VI	(4)	A decision
VII	(5)	A plan

GRANU TOTAL= 5343

CHI-SQUARE (CF TABLE)   398.38313
DF= 72

VALUES NOT ENTERED 16
CASE NO.   VARIABLE 2   VARIABLE 1
1403   12   0
1413   13   0
1423   14   0
1428   3   0
1438   10   0
1448   3   0
1457   7   0
1458   3   0
1459   5   0
1467   12   0
1468   9   0
1469   9   0
1477   12   0
1478   12   0
1479   6   0
4427   0   5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0593
MEAN(1)=   4.01661   SD(1)=   1.79426
MEAN(2)=   7.90035   SD(2)=   3.31766

Table 3-110 Desired Class of Information vs. Class of Task Output

```
Q16     IS CROSS TABULATED WITH     Q8     OR,

VARIABLE  2 IS CROSS  ABJLATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2      14      1
   1      14      1
```

(2)				(EXTREME RIGHT VALUE IS ROW TOTAL)									
Q16													
14 •	27	2	19	66	13	22	46	34	41	34	31	22	70 427
T•	1	0	0	2	0	1	1	1	1	1	1	1	2 10
R•	6	0	4	15	3	5	11	8	12	8	7	5	15 100
C•	7	3	7	6	6	9	11	13	6	13	21	15	50 10
•													
13 •	18	4	22	44	10	6	16	12	26	5	9	11	6 187
T•	0	0	1	1	0	0	0	0	1	0	0	0	0 4
R•	10	2	12	24	5	3	9	5	14	3	5	6	3 100
C•	5	7	8	4	5	2	4	4	4	2	6	8	4 4
•													
12 •	86	5	31	106	43	18	47	18	71	27	41	16	15 524
T•	2	0	1	3	1	0	1	0	2	1	1	0	0 12
R•	16	1	6	20	8	3	9	3	14	5	8	3	3 100
C•	23	8	12	10	20	7	15	7	10	11	27	11	11 12
•													
11 •	3		2	28	4	6	0	3	8	32	7	3	1 136
T•	0		0	1	0	0	0	0	0	1	0	0	0 3
R•	3		2	26	4	6	8	3	8	30	7	3	1 100
C•	1		1	3	2	2	2	1	1	13	5	2	1 3
•													
10 •	90	24	63	313	49	73	128	64	249	80	53	40	19 1225
T•	2	1	1	7	1	2	3	2	4	2	1	1	0 29
R•	7	2	5	26	4	6	10	5	20	7	3	3	2 100
C•	25	39	24	30	23	30	31	25	36	31	22	28	14 29
•													
9 •	33	7	17	143	19	47	37	56	53	30	9	16	14 490
T•	1	0	0	3	0	1	1	1	1	1	0	0	0 12
R•	7	1	3	29	4	10	8	11	13	6	2	3	3 100
C•	9	11	6	14	9	19	9	22	9	12	4	11	13 12
•													
8 •	20	2	11	38	17	3	18	8	42	9	7	9	2 186
T•	0	0	0	1	0	0	0	0	1	0	0	0	0 4
R•	11	1	6	20	9	2	10	4	23	5	4	5	1 100
C•	5	3	4	4	8	1	4	3	6	4	5	6	1 4
•													
7 •	5	6	5	23	11	31	18	7	38	11	2	1	159
T•	0	0	0	1	0	1	0	0	1	0	0	0	4
R•	3	4	4	14	7	19	11	4	24	7	1	1	100
C•	1	10	2	2	5	13	4	3	6	4	1	1	4
•													
6 •	5	1	5	1	9		5	1	7		2		36
T•	0	0	0	0	0		0	0	0		0		1
R•	14	1	14	3	25		14	3	19		5		100
C•	1	2	2	0	4		1	0	1		1		1
•													
5 •	24	5	16	186	16	27	40	34	54	20	2	15	7 448
T•	1	0	0	4	0	1	1	1	1	0	0	0	0 11
R•	5	1	4	42	4	6	9	8	12	4	0	3	2 100
C•	7	8	5	14	8	11	10	14	8	8	1	10	5 11
•													
4 •	19		54	30	1	4	7	7	35	1	4	3	1 165
T•	0		1	1	0	0	0	0	1	0	0	0	0 4
R•	11		33	18	1	2	4	4	21	1	2	2	1 100
C•	5		20	3	0	2	2	3	5	0	3	2	1 4
•													
3 •	9		6	5	4	1	8	2	13		1	3	2 55
T•	0		0	0	0	0	0	0	0		0	0	0 1
R•	16		11	11	7	2	15	4	24		2	5	4 100
C•	2		2	1	4	0	2	1	2		1	2	1 1
•													
2 •	6		5	19	5	2	1	1	11			1	47
T•	0		0	0	0	0	0	0	0			0	1
R•	13		11	38	4	4	2	2	23			2	100
C•	2		2	2	1	1	0	0	2			1	1
•													
1 •	25	5	12	43	13	4	29	11	28	5	3	4	2 179
T•	1	0	0	1	0	0	1	0	1	0	0	0	0 4
R•	13	3	6	24	7	2	16	6	16	3	2	2	1 100
C•	6	4	4	4	6	2	7	4	4	2	2	3	1 4
•													

```
•••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••(
( 1)       2.     4     5      6     7      8     10     12    16
14         3            5            7            9     11     13

COLUMN     166    207    210    409    696    151    139
TOTAL         61     1045    244    258    254    144

PERCENT    0      4      5      10     16     4      3
TOTAL         1      25     5      6      6      3
```

Table 3-110. (Continued)

GRAND TOTAL= 4234

CHI-SQUARE (OF TABLE)   1168.02582
DF= 156

VALUES NOT ENTERED1125

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0885
MEAN(1)=   7.30379   SD(1)=   3.22566
MEAN(2)=   7.21739   SD(2)=   4.77774

(Question 16)
I.	(15)	Requested information source
II	(1)	Concepts
III	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII	(10)	Technical status
XIII.	(12)	Utilization
XIV	(2)	Cost and funding, administrative action

(Question 8)
II	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

Table 3-111. Desired Detail of Transporting Medium vs. Class of Task Output

```
025    IS CROSS TABULATED WITH    28    28.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5358

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2      3      1
    1     14      1


* 21         (EXTREME RIGHT VALUE IS ROW TOTAL)
025
    1 *    216    16    119   497   130    89   186   133   281   122    87    60    67  1972
    T*       4     0     2     0     2     2     3     2     5     2     2     1     1    37
    P*      11     1     6    25     5     5     9     7    14     6     4     3     3   100
    C*      46    21    34    37    13    27    37    41    33    38    44    33    39    37
      *
    2 *    216    52    310   771   135   217   288   170   526   179    91    95    85  2993
    T*       4     1     4    14     3     4     5     3     9     3     2     2     2    56
    P*       7     2     4    26     5     7    10     6    17     6     3     3     3   100
    C*      45    69    57    57    53    67    57    52    60    56    46    52    49    56
      *
    1 *     44     7    24    87    21    18    27    21    56    20    18    29    21   393
    T*       1     0     0     2     0     0     1     0     1     0     0     1     0     7
    P*      11     2     9    22     5     5     7     5    14     5     5     7     5   100
    C*       9     9     7     6     8     6     5     6     7     6     9    16    12     7
      *
  *************************************************************************************
 (  1)       2           4           6           8          10          12          14
QR           1           4           7           9          11          13

COLUMN     474          332         256         551         843         196         173
TOTAL            75          1155        324         324         521         184

PERCENT      9           6           5           9          16          4           3
TOTAL            1           25          6           6           6           3

GRAND TOTAL=  5358

CHI-SQUARE (FF TABLE)         94.57431
DF=  24
```

(Question 25)
I.	(1)	A once over light
II.	(3)	A specified answer
III.	(2)	A detailed analysis

(Question 8)
II.	(1)	Concepts
III.	(8)	Raw data
IV	(5)	Math aids and formulae, computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII	(11)	Test processes and procedures
VIII	(13)	Evaluation
IX	(9)	Specifications
X.	(10)	Performance and characteristics
XI	(6)	Production processes and procedures
XII	(10)	Technical status
XIII	(12)	Utilization
XV	(2)	Cost and funding, administrative action

```
VALUES NOT ENTERED   1
  CASE NO.    VARIABLE  2    VARIABLE  1
  5307             0             10

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE)

CORRELATION COEFF (RAW DATA)
MEAN( 1)=       3.9232    STD  (1)=      1.6366
MEAN( 2)=       3.29420   S  (2)=      0.6547
```

Table 3-112. Desired Acquisition Time for Information vs. Kind of Task Output

(Question 19)

I	(1)	From recall
II	(2)	Less than 1 day
III	(3)	1 - 7 days
IV	(4)	8 - 30 days
V	(5)	31 - 90 days
VI	(7)	More than 90 days

(Question 9)

I	(02)	Research - basic
II	(01)	Research - applied
III	(11)	System analysis
IV	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

Table 3-113. Location of First Source for Information vs. Kind
of Task Output

```
    14    IS CROSS TABULATED WITH      9      28 ,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5352

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2     18      1
    1     12      1


( 2)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
 14
  15 •    2   21   21   13•   16    4    5   10    1    2    5       100
   T•     (    0    0   • 0    0    0    0    0    0    0    0         2
   R•     2   21   21   13   16    4    5   10    1    2    5       100
   C•     1    2    1    2    2    1    1    2    0    1    2         2
    •
  14 •    2   12   13    3    6   10    4    2    4    1    5    67
   T•     0    0    0    0    0    0    0    0    0    0    0     1
   R•     3   18   19    4    9   15    6    7    3    6    7   100
   C•     1    1    2    1    1    2    1    1    1    2    0     t
    •
  13 •    3   10   14    2    4    6    3              1    2    1    46
   T•     0    0    0    0    0    0    0              0    0    0     1
   R•     7   22   30    4    9   11    7              2    4    2   100
   C•     1    1    2    0    1    1    1              0    1    1     1
    •
  12 •    2    4    5         2    1    5    4    1    2    1    31
   S•     0    0    0         0    0    0    0    0    0    0     1
   R•     6   26   16         5    3   16   13    3    6    3   100
   C•     1    1    1         0    0    1    1    0    1    0     1
    •
  11 •        36   42   44   49   46   14   25   26   17   17    3   370
   T•         1    1    1    1    1    0    0    0    0    0    0     6
   R•        11   11   14   15   14    4    8    8    5    5    1   100
   C•         4    7    8    7    8    3    4   11    5    7    4     6
    •
  10 •   33  120   45   51   41   40   42   56   16   11   32    7   494
   T•     1    2    1    1    1    1    1    1    0    0    1    0     9
   R•     7   24    9   10    8    8    9   11    3    2    6    1   100
   C•    15   14    7    9    6    7   10    8    7    5   14   10     9



   9 •    7   52   43   48   40   63   52   64   25   36   35    5   507
   T•     0    1    1    1    1    1    1    1    0    1    1    0     9
   R•     1   10    9    9   16   12   10   13    5    7    7    1   100
   C•     3    6    7    9   12   10   13   10   10   17   15    7     9
    •
   8 •    7   34   32   39   23   65   15   41    6   21   15    4   297
   T•     0    1    1    1    0    1    0    1    0    0    0    0     6
   R•     2   13   11   10    4   22    5   15    2    7    5    1   100
   C•     3    4    5    5    3   11    4    6    2   10    7    5     6
    •
   7 •         6   10   10    5    6   14   16    2    3              72
   T•         (    0    0    0    0    0    0    0    0              1
   R•         9   14   14    7    8   19   22    3    4             100
   C•         1    2    2    1    1    3    2    1    1               1
    •
   6 •   21  126   43   76   83   87   67  110   42   33   31   19   740
   T•     0    2    1    1    2    2    1    2    1    1    1    0    14
   R•     3   17   11   10   11   11    9   14    5    3    4    2   100
   C•     9   15   11   14   12   14   17   17   17   15   13   26    14
    •
   5 •    9   40   24   27   29   21   13   41   14    5    9    4   236
   T•     0    1    1    1    1    0    0    1    0    0    0    0     4
   R•     4   17   10   11   12    9    6   17    6    2    4    2   100
   C•     4    5    6    5    6    4    3    6    6    3    4    5     4
    •
   4 •    9   27   14    9   15   16         15    9    5    3    1   136
   T•     0    1    0    0    0    0         0    0    0    0    0     3
   R•     7   20   11    7   11   12    7   11    7    4    2    1   100
   C•     4    3    3    5    3    4    1    2    4    2    1    1     3
    •
   3 •   51  133   71   70  110   69   46   76   17   23   30    3   696
   S•     1    2    1    1    2    1    1    1    0    0    1    0    13
   R•     7   19   11   10   16   10    6   11    2    3    4    0   100
   C•    23   15   15   13   15   11   11   11    7   11   13    4    13
    •
   2 •   63  179  115  114  103  105   65  113   57   35   37   11  1397
   T•     1    3    2    2    2    2    1    2    1    1    1    0    19
   R•     6   18   12   11   10   10    6   11    6    3    4    1   100
   C•    29   21   21   21   15   17   16   17   23   17   16   15    19
```

Table 3-113. (Continued)

```
    *
I *   11   50   67   57  101   71   52   88   25   25   17   16  574
T*    0    1    1    1    2    1    1    2    0    0    0    0   11
    **
**    2    9   12   10   18   12    9   15    4    *    3    2  100
C*    5    6   11   10   15   12   13   13   10   12    7   14   11
    *
    ***************************************************************
( 1)   1        3        5        7        9        11
9           2        4        6        8        10        12

COLUMN  219       639       667       404       243       236
TOTAL        870       555       609       665       212       73

PERCENT   4        11        12        8         5         4
TOTAL        16        10        11        12                  1
```

GRAND TOTAL= 5352

CHI-SQUARE (OF TABLE)   500.12693
DF = 154

VALUES NOT ENTERED   7
CASE NO.   VARIABLE (VARIABLE 1
1303   0   9
2679   2   0
2686   2   0
2694   10   0
3552   1   0
3568   1   0
4389   0   8

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0202
MEAN(1)=   5.39616   SD(1)=   2.83317
MEAN(2)=   5.65169   SD(2)=   3.73006

(Question 14)
I	(01)	Received with task assignment
II	(04)	Recalled it
III	(09)	Searched own collection
IV	(19)	Respondent's action
V	(03)	Assigned subordinate to get it
VI	(05)	Asked a colleague
VII	(02)	Asked my supervisor
VIII	(05)	Requested search of department files
IX.	(06)	Asked an internal company consultant
X.	(10)	Searched company TIC
X	(7)	Requested library search
XI	(15)	Requested data from manufacturer, vendor or supplier
XI.	(14)	Searched manufacturer, vendor or supplier sources
XII	(11)	Searched an outside library
XIII	(18)	Asked an external consultant or expert
XIV	(13)	Requested search of DOD information/data center
XIV	(12)	Searched DOD information/data center
XV	(17)	Asked customer

(Question 9)
I	(02)	Research - basic
II	(01)	Research - applied
III	(11)	System analysis
IV.	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

Table 3-114. Desired Volume of Transporting Medium vs. Kind of Task Output

```
Q22    IS CROSS TABULATED WITH      Q9      OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5352

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      2      4       1
      1     12       1
```

```
• ( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q22
   4 •    92   149   259   219   277   267   146   231   105   123    98   28 2204
   T•      2     7     5     4     5     5     3     4     2     2     2    1   41
   P•      4    16    12    10    13    12     7    10     5     6     4    1  100
   C•     42    41    44    39    42    44    36    35    43    58    42   38   41
     •
   3 •    78   253   118   133   127   105    82   115    67    31    46   13 1153
   T•      1     5     2     2     2     2     2     2     1     1     1    0   22
   P•      7    22    10    12    11     9     7    10     4     3     4    1  100
   C•     36    30    15    24    19    17    20    17    19    15    19   18   22
     •
   2 •    32   188   175   159   226   200   154   261    65    50    76   30 1623
   T•      1     4     3     3     4     4     3     5     1     1     1    1   30
   P•      2    12    11    10    14    12     9    16     4     3     5    2  100
   C•     15    12    25    29    34    33    38    39    28    24    32   41   30
     •
   1 •    17    54    45    44    37    37    22    59    22     8    16    2  372
   T•      0     1     1     1     1     1     1     1     0     0     0    0    7
   P•      5    17    12    12    10    10     6    16     6     2     4    1  100
   C•      8     7     7     8     5     6     5     9     9     4     7    3    7
     •
   ••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••( ••••••••
   ( 1)    1           3           5           7           9          11
Q9            2           4           6           8          10          12

. COLUMN  219         405         667         404         243         230
  TOTAL        455         555         609         666         212         73

PERCENT    4          11          12           7           4           4
  TOTAL        12          10          11          12           5           1
```

(Question 22)
I   (4) All from recall
II (1) One report or document
III (2) A sampling of the reports and documents available
IV (3) All the reports and documents that could be found pertinent to the question

```
GRAND TOTAL  5352

CHI-SQUARE FOR TABLE       1524.1989
DF =  33

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT = 0.0344
MEANE  1)=      5.601   S.D. ( )=       2.8450
MEANE  ( )=     5.256   S.D. ( )=       0.9961
```

(Question 9)
I   (02) Research - basic
II. (01) Research - applied
III (11) System analysis
IV   (0) Development - advanced
V   (04) Development - engineering
VI   (05) Development - operational system
VII (06) R&D support
VIII (07) Test or evaluation
IX   (08) Production process
X   (09) Production end items
XI   (10) Reliability or quality control
XII (12) Customer relations

Table 3-115. Usefulness of Title Listings or Abstracts vs. Kind
of Task Output

```
    23    IS CROSS TABULATED WITH    9    UP,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE +. MUM MINIMUM  (AS SPECIFIED)
    2       3       1
    1      12       1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
  23
    3 *    101   325   138   139   108   125    76   100    36    30    51    17 1246
    T*       2     6     3     3     2     2     1     2     1     1     1     0   23
    R*       8    26    11    11     9    10     6     8     3     2     4     1  100
    C*      46    38    23    25    16    21    19    15    15    14    22    23   23
      *
    2 *     24   169   140   125   142    98    83   127    45    51    35    10 1043
    T*       0     3     3     2     3     2     2     2     1     1     1     0   20
    R*       2    16    13    12    14     9     8    12     4     5     3     1  100
    C*      11    20    23    23    21    16    21    19    19    24    15    14   20
      *
    1 *     94   367   331   291   417   386   245   440   152   131   150    46 3060
    T*       2     7     6     5     8     7     5     8     3     2     3     1   57
    R*       3    12    11    10    14    13     9    14     5     4     5     2  100
    C*      43    43    54    52    63    63    61    66    67    67    64    63   57
      *
  ************************************************************************
  ( 1)    1           3           5           7           9          11
    9           2           4           6           8          10          12

COLUMN   219         609         567         404         243         236
TOTAL         860         555         609         667         212          73

PERCENT    4          11          12           8           5           4
TOTAL          16          10          11          12           4           1

GRAND TOTAL= 5354
```

```
CHI-SQUARE (OF TABLE)    274.91500
DF=  22
```

(Question 23)
- I   (3)   Would not have been useful
- II   (2)   Would have found them useful
- III   (1)   Used them for this chunk

(Question 9)
- I   (02)   Research - basic
- II   (01)   Research - applied
- III   (11)   System analysis
- IV   (03)   Development - advanced
- V   (04)   Development - engineering
- VI   (05)   Development - operational system
- VII   (06)   R&D support
- VIII   (07)   Test or evaluation
- IX   (08)   Production processes
- X   (09)   Production end-items
- XI   (10)   Reliability or quality control
- XII   (12)   Customer relations

```
VALUES NOT ENTERED    5
  CASE NO.      VARIABLE  2      VARIABLE  1
   2679             1                0
   2686             1                0
   2694             1                0
   3552             1                0
   3558             1                0
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
CORRELATION COEFFICIENT = 0.1621
MEAN( 1)=      5.33615     SD( 1)=      2.83317
MEAN( 2)=      1.66057     SD( 2)=      0.83028
```

Table 3-116. Desired Detail of Transporting Medium vs. Kind of
Task Output

```
Q25     IS CROSS TABULATED WITH     Q9     OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5354

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2      3       1
   1      12      1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q25
   3 •    115   355   244   228   225   253   136   199    72    64    76    24 19 9
   T•       2     7     5     4     4     4     3     4     1     1     1     6    7
   R•       6    18    12    12    11    12     7    10     4     3     4     1  1 0
   C•      53    41    40    41    34    38    34    30    30    30    32    33    7

   2 •    67   434   320   234   391   349   223   429   159   133   134    40 29 3
   T•      2     8     6     5     7     7     4     8     3     2     3     1    6
   P•      3    15    11    10    13    12     7    14     5     4     4     1  1 0
   C•     40    50    53    53    59    57    55    64    65    63    57    55    6

   1 •    17    71    47    33    51    27    45    39    12    15    26     9  3 2
   T•      0     2     1     1     1     1     1     1     0     0     1     0    7
   R•      4    18    12     8    13     7    11    10     3     4     7     2  1 3
   C•      8     6     8     6     8     4    11     6     5     7    11    12    7

••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••• •••
( 1)      1           3           5           7           9          11
Q9             2           4           6           8          10          12

COLUMN   219         609         667         404         243        236
 TOTAL          850         555         539         667         212        73

PERCENT    4          11          12           7           4           4
 TOTAL          10          10          11          12           3           1

GRAND TOTAL=  5354
```

	(Question 25)	
I	(1)	A once over lightly
II	(3)	A specified answer
III	(2)	A detailed analysis

	(Question 9)	
I	(02)	Research - basic
II	(01)	Research - applied
III	(11)	System analysis
IV	(03)	Development - advanced
V	(04)	Development - engineering
VI	(05)	Development - operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

Table 3-117. Desired Layout of Transporting Medium vs. Kind of
Task Output

Table 3-117. (Continued)

```
 •
3 •     1     21    17   17    14    25    4    23    9    5    5    2   139
T•      0     0     0    0     0     0     0     0    0    0    0    0     3
R•      1     15    5    14    10    15    3    17    6    4    4    1   100
C•      0           5          4         2    4    2    3    4     3
 •
2 •     1     7     5    4     14    14    7    5     7    4    0    2    30
T•      0     0     0    0     0     0     0    0     0    0    0    0     2
R•      1     4     5    23    15    0    11    9     5    8    3   100
C•      0     1     0    1     2          1    1     2    3    3     2
 •
1 •     24   109   71   57    74    71   44   77    35   20   27    9   602
T•      1    3     1    4     1          2    1     1    0    1    0    11
R•      4    18    10   11    10    10    7    13    6    3    4    1   100
C•      14   1     49   42         20   10   12    15       12   12    11
 •
•••••••••••••• •••••••••••••••••••••• ••• ••• •••••••• •••••••••••••
(13)    1                            11
J9               2         5                      0       10
                                              6             12

COLUMN  217        0         744         402        240        234
TOTAL        535        42         604        604        212         73

PERCENT  4         11          12         7         4          4
TOTAL        15         16         11        12        3          1
```

GRAND TOTAL = 53 9

CHI-SQUARE (IN TABLE)   471.16
DF= 77

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME CATEGORIES IN THE ROW VARIABLE)

CORRELATION COEFFICIENT = 0.103
MEAN(1)=   2.596   SD(1)=   2.624707
MEAN(2)=   5.175   SD(2)=   3.24524

(Question 27)
I   (14)   Recall
II   (13)   Telephone conversation
III   (15)   Group discussion
IV   (3)   Photographs
V   (4)   Graphics (maps, graphs, etc.)
VI   (2)   Tables or lists
VII   (1)   Narrative text
VIII   (18)   Narrative text and tables or lists
IX   (9)   Graphics and lists
X   (8)   Photographs and text
XI   (7)   Graphics and text
XII   (16)   Graphics, text and oral
XIII   (17)   Graphics, text, oral and recall
XIV   (12)   Informal briefing with chalk or pencil drawings
XV   (5)   Microfilm - microfiche
XVI   (6)   Slides or motion pictures
XVII   (10)   Formal briefing or lecture

(Question 9)
I   (02)   Research - basic
II   (01)   Research - applied
III   (11)   System analysis
IV   (04)   Development - advanced
V   (01)   Development - engineering
VI   (05)   Development - operational system
VII   (06)   R&D support
VIII   (07)   Test or evaluation
IX   (08)   Production processes
X   (09)   Production end-items
XI   (10)   Reliability or quality control
XII   (12)   Customer relations

Table 3-118. Class of Information vs. Kind of Task Output

```
    02A    IS CROSS TABULATED WITH     C9      OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER CF REPLICATIONS= 5459

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      14       1
    1      12       1


( 2)           (EXTREME RIGHT VALUE IS ROW TOTAL)
 028
  14 •      6    19    18    16    20     8    17    17    11    10     4    15   160
   T•       5     C     0     r     0     5     0     C     0     0     0     0     3
   P•       4    11    11    10    13     5    11    11     7     5     2     5   130
   C•       3     2     3     4     3     1     4     3     5     6     2    21     4
     •
  13 •      4    27    28    22    16    18    14    31    11                 9     0   189
   T•       0     1     1     0     0     C     0     1     0     0     0     0     4
   P•       2    14    15    12     5    10     7    16     6     5     5     3   100
   C•       2     3     5     4     1     3     3     5     5     4     4     8     4
     •
  12 •     15    79    36    35    23    30    32    28    12     8    11    12   329
   T•       C     1     1     1     0     1     1     1     0     0     0     0     6
   P•       6    24    12    11     7     9    10     9     4     2     3     4   100
   C•       9     9     6     5     3     5     8     4     5     4     5    14     6
     •
  11 •      3    20     9     8    31    26     6    19    44    33    22     2   223
   T•       0     0     C     0     1     0     0     C     1     1     0     0     4
   P•       1     9     4     4    14    12     3     9    20    15    10     1   100
   C•       1     2     1     1     5     4     1     3    18    16     9     3     4
     •
  10 •     50   217   170   191   101   164    94   14.    62    42    39    13  1347
   T•       1     4     3     3     3     3     2     3     1     1     1     0    25
   F•       4    1,.   13    13    13    12     6    11     5     3     3     1   100
   C•      23    25    28    32    27    27    21    22    26    20    17    14    25
     •
   9 •      7    63    74    77   132   121    67   139    30    36    62     5   813
   T•       0     1     1     1     2     2     1     3     1     1     1     3    15
   R•       1     8     9     9    16    15     8    17     4     4     8     1   100
   C•       3     7    12    14    20    20    17    21    12    17    26     7    15


   8 •      3    55    37     8    16    10    16    24     4    12    10     4   188
   T•       0     1     1     0     0     0     0     0     0     0     0     0     4
   R•       2    15    20     4     9     5     9    13     2     6    10     2   100
   C•       1     4     5     1     2     2     4     4     2     6     8     5     4
     •
   7 •      2    31    21    17    19    24    11    82    11     4    12     1   235
   T•       0     1     0     0     0     0     0     2     0     0     0     0     4
   P•       1    13     9     7     8    10     5    35     5     2     5     0   100
   C•       1     4     3     3     3     4     3    12     5     2     5     1     4
     •
   6 •     36    79     4    17    14     6     9    17     4           2     1   187
   T•       1     1     0     0     0     0     C     0     0           0     0     3
   P•      10    42     2     9     7     3     5     9     2           1     1   100
   C•      16     9     1     3     2     1     2     3     2           1     1     3
     •
   5 •      4    46    37    67   114   106    44    47    17    42    16     4   546
   T•       0     1     1     1     2     2     1     1     0     1     0     0    10
   R•       1     8     7    12    21    19     8     9     3     8     3     1   100
   C•       2     5     6    12    17    17    11     7     7    20     7     5    10
     •
   4 •     23    92    64    16    30    40    37    42     3     7    11     1   387
   T•       0     2     1     1     1     1     1     1     0     0     0     0     7
   P•       6    24    17     0     8    13    10    11     1           3     0   100
   C•      11    11    11     6     4     7     9     6     1     3     5     1     7
     •
   3 •     13    58    54    25    40    25    35    42    28     6    24     9   372
   T•       0     1     1     0     1     0     1     1     1     0     0     0     7
   R•       5    16    15     0    11     7     9    14     8     2     6    11   100
   C•       8     7     5     5     6     4     9     6    12     3    10    11     7
     •
   2 •      0    55    67    43    34    10    42    22     7     3     5     4   378
   T•       1     1     1     1     1     1     1     C     0     0     0     0     7
   P•       2    24    13    12    10     0     8     6     2     1     1     1   100
   C•      11    11     8     8     6     5     8     3     3     1     2     5     7
     •
 •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
 ( 1)      1           3           4           6           7           9          11
  Q9              2           4           5           6           8          10          12

 COLUMN   219         630         667         404         243         236
  TOTAL          860         535         628         667         212          74

 PERCENT    4          11          12           8           5           4
  TOTAL          16          10          11          12           4           1
```

Table 3-118 (Continued)

GRAND TOTAL = 5353

CHI-SQUARE (OF TABLE) = 1310.25251
DF = 132

VALUES NOT ENTERED = 6
CASE NO.   VARIABLE 2   VARIABLE 1
2675   10   0
2684   8   0
2684   10   0
3552   11   0
3566   5   0
4427   0   4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE)

CORRELATION COEFFICIENT = C.1C8)
MEAN(1)=   5.33614   SD(1)=   2.83317
MEAN(2)=   7.90035   SD(2)=   3.31766

(Question 28)
II	(1)	Concepts
III	(5)	Raw data
IV	(5)	Math aids and formulae computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII	(11)	Test processes and procedures
VIII	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII	(10)	Technical status
XIII	(12)	Utilization
XIV	(2)	Cost and funding, administrative action

(Question 9)
I	(02)	Research – basic
II	(01)	Research – applied
III	(11)	System analysis
IV	(03)	Development – advanced
V	(04)	Development – engineering
VI	(05)	Development – operational system
VII	(06)	R&D support
VIII	(07)	Test or evaluation
IX	(08)	Production processes
X	(09)	Production end-items
XI	(10)	Reliability or quality control
XII	(12)	Customer relations

Table 3-119. Location of First Source for Information vs. Field
of Task Output

```
    C14    IS CROSS TABULATED WITH     C20    GR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      15      1
    1       9      1
```

```
( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q14
 15          8     2     8    27    26    14     7     8          100
             0     0     0     1     0     0     0     0            2
      N•     8     2     8    27    26    14     7     8          1.0
      C•     2     2     2     2     2     2     1     2            2
       •
 14 •        4     1    11    16    22     4     5     2           65
      T•     C     0     0     0     0     0     0     0            1
      R•     6     2    17    25    34     6     8     3          100
      C•     1     1     3     1     2     1     1     0            1
       •
 13 •        6     7     1     3     9     8     5     7           46
      T•     0     0     0     0     0     0     0     0            1
      R•    13    15     2     7    20    17    11    15          100
      C•     1     6     0     0     1     1     1     2            1
       •
 12 •        3     7     1     6     5     3     3     3           31
      T•     0     0     0     0     0     0     0     0            1
      R•    10    23     3    19    16    10    10    10          100
      C•     1     6     0     0     0     0     0     1            1
       •
 11 •       28     6    17    84    93    36    34    20          318
      T•     1     0     0     2     2     1     1     0            6
      R•     9     2     5    26    29    11    11     6          100
      C•     6     5     5    .7     7     6     5     4            6
       •
 10 •       30    14    28    95   117   101    62    34     7    488
      T•     1     0     1     2     2     2     1     1     0      9
      R•     6     3     6    19    24    21    13     7     1    100
      C•     6    12     8     8     9    16     9     7    13      9


       •
  9 •       55          47   144    91    55    71    41     3    505
      T•     1           1     3     2     1     1     1     0      9
      R•    11           9    29    18    11    14     8     0    100
      C•    11          14    11     7     9    10     9     2      9
       •
  8 •       28     2    18    84    77    32    41    14     1    297
      T•     1     0     0     2     1     1     1     0     0      6
      R•     9     1     6    28    26    11    14     5     0    100
      C•     6     2     5     7     6     5     6     3     2      6
       •
  7 •        7     2     2    19    20     9    11     2          72
      T•     0     0     0     0     0     0     0     0            1
      R•    10     3     3    26    28    13    15     3          100
      C•     1     2     1     2     2     2     1     2     0      1
       •
  6 •       69    16    51   190   176    65    87    99    16    769
      T•     1     0     1     4     3     1     2     2     0     14
      R•     9     2     7    25    23     8    11    13     2    100
      C•    14    13    15    15    14    10    13    21    31     14
       •
  5 •       50     5     9    41    54    31    25    13     4    232
      T•     1     0     0     1     1     1     0     0     0      4
      R•    22     2     4    18    23    13    11     6     2    100
      C•    10     4     3     3     4     5     4     3     8      4
       •
  4 •       16     5    16    21    30    23    16     9          136
      T•     0     0     0     0     1     0     0     0            3
      R•    12     4    12    15    22    17    12     7          100
      C•     3     4     5     2     2     4     2     2            3
       •
  3 •       54    19    47   148   169    62   172    66     9    696
      T•     1     0     1     3     3     1     2     1     0     13
      R•     8     3     7    21    24     9    18     9     1    100
      C•    11    16    14    12    13    10    18    14    17     13
       •
  2 •       94    29    50   227   255   127   128    84    10   1004
      T•     2     1     1     4     5     2     2     2     0     19
      R•     9     3     5    23    25    13    13     8     1    100
      C•    19    24    15    18    20    20    19    18    19     19
```

Table 3-119. (Continued)

```
    •
  1 •    ^3    6    29   153   151    63    64    62    4   575
    T•    1    0    !     3     3     1     1     1    0    11

    R•    7    1    5    27    26    11    11    11    1   1CO
    C•    9    5    9    12    12    10     9    13    8    11
    •
.............................................................
( 1)         1         3         5         7         9
Q10               2         4        .6         8

COLUMN     495        335       1295       681       52
  TOTAL          121       1258       633       464

PERCENT      9         6        24        .3         1
  TOTAL           2         24        12         9
```

GRAND TOTAL= 5334

CHI-SQUARE (OF TABLE)   390.36718
OF= 112

VALUES NOT ENTERED 25
```
   CASE NO.    VARIABLE  2    VARIABLE  1
      4C5          14            0
      472           2            0
      479          14            0
     1303           0            6
     1433          10            0
     1443           2            0
     1453           9            0
     1515          10            0
     1566          10            0
     1665          10            0
     1E75          10            0
     1E85          10            0
     2548           2            0
     2584           5            0
     2589           2            0
     .594           2            0
     2763           5            0
     2769           5            0
     2827           9            0
     2635          10            0
     2843           1            0
     4389           C            5
     5296           5            0

     5309          11            0
     5350          11            0
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL CATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0350
```
MEAN(  1)=    4.85258   SD(  1)=    1.95276
MEAN(  2)=    5.66169   SD(  2)=    3.73006
```

(Question 14)

I	(01)	Received with task assignment
II	(04)	Recalled it
III	(09)	Searched own collection
IV	(19)	Respondent's action
V	(03)	Assigned subordinate to get it
VI	(05)	Asked a colleague
VII	(02)	Asked my supervisor
VIII	(08)	Requested search of department files
IX	(06)	Asked an internal company consultant
X	(10)	Searched company TIC
X.	(7)	Requested library search
XI	(15)	Requested data from manufacturer, vendor, or supplier
XI	(14)	Searched manufacturer, vendor or supplier sources
XII	(11)	Searched an outside library
XIII	(18)	Asked an external consultant or expert
XIV	(13)	Requested search of DOD information/data center
XIV	(12)	Searched DOD information/data center
XV	(17)	Asked customer

(Question 10)

I. Production, Management and Social Sciences
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (26) Production and management
  (28) Psychology and human engineering

II Medical Sciences
  (16) Medical sciences

III Mechanical, Industrial, Civil, and Marine Engineering
  (11) Ground transportation equipment
  (13) Installations and constructions
  (18) Military sciences and operations
  (24) Photography and other reproduction processes
  (29) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation

IV Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided Missiles
  (19) Navigation

V Electronics and Electrical Engineering
  (04) Communications
  (06) Detection
  (07) Electrical equipment
  (08) Electronics, electronic equipment

VI Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (22) Ordnance

VII Physical Science
  (02) Astronomy, geophysics and geography
  (09) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (25) Physics
  (27) Propulsion systems

VIII Research and Research Equipment
  (30) Research and research equipment

IX Mathematics
  (15) Mathematics

Table 3-120. Desired Class of Information S2 vs. Field of Task Output

Q15   IS CROSS TABULATED WITH   Q10   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
  2   14   1
  1   9   1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q16

Q16										Row Total
14 *	90	6	59	77	84	39	30	37	1	423
T*	2	0	1	2	2	1	1	1	0	10
R*	21	1	14	18	20	9	7	9	0	100
C*	23	6	22	8	8	8	5	10	3	10
13 *	14	11	10	47	47	15	16	29	1	187
T*	0	0	0	1	1	0	0	1	0	4
R*	7	6	5	25	22	8	9	16	2	100
C*	4	11	4	5	4	3	3	8	8	4
12 *	58	17	24	89	113	89	84	40	6	520
T*	1	0	1	2	3	2	2	1	0	12
R*	11	3	5	17	22	17	16	8	1	100
C*	15	18	9	9	11	18	15	11	15	12
11 *	25		2	16	23	26	10	4		106
T*	1		0	0	1	1	0	0		3
R*	24		2	15	22	25	9	4		100
C*	0		1	2	2	5	2	1		3
10 *	81	25	55	328	286	157	180	104	3	1219
T*	2	1	1	8	7	4	4	2	0	23
R*	7	2	5	27	23	13	15	9	0	100
C*	20	26	21	33	29	31	33	28	8	29
9 *	44	6	46	125	148	43	48	30		490
T*	1	0	1	3	4	1	1	1		12
R*	9	1	9	26	30	9	10	6		100
C*	11	6	17	13	15	9	9	8		12
8 *	18	4	13	42	41	29	25	12	2	136
T*	0	0	0	1	1	1	1	0	0	4
R*	10	2	7	23	22	16	13	6	1	100
C*	5	4	5	4	4	6	5	3	5	4
7 *	8	2		46	41	27	21	11	2	158
T*	0	0		1	1	1	0	0	0	5
R*	5	1		29	26	17	13	7	1	100
C*	2	2		5	4	5	4	3	5	4
6 *	3	6	2	2	2		8	3	5	36
T*	0	0	0	0	0	0		0	0	1
R*	8	17	6	6	6	14	22	8	13	100
C*	1	6	1	0	0	1	1	1	13	1
5 *	41	8	33	115	145	29	48	28	1	448
T*	1	0	1	3	3	1	1	1	0	11
R*	9	2	7	26	32	6	11	6	0	100
C*	10	3	12	12	14	6	9	8	3	11
4 *	5	1	4	28	26	7	31	50	13	165
T*	0	0	0	1	1	0	1	1	0	4
R*	3	1	2	17	16	4	19	40	8	100
C*	1	1	1	3	3	1	6	13	33	4
3 *	4	3	2	12	11	6	11	6		55
T*	0	0	0	0	0	0	0	0		1
R*	7	5	4	22	20	11	20	11		100
C*	1	3	1	1	1	1	2	2		1
2 *	4	2		12	13	3	9	3	1	47
T*	0	0		0	0	0	0	0	0	1
R*	9	4		26	28	6	19	6	2	100
C*	1	2		1	1	1	2	1	3	1
1 *	4	6	17	44	37	30	25	14	2	179
T*	0	0	0	1	1	1	1	0	0	4
R*	2	3	9	25	21	17	14	8	1	100
C*	1	6	6	4	4	6	5	4	5	4

(1) Q10 : 1   2   3   4   5   6   7   8   9

COLUMN TOTAL : 399   97   267   983   1312   505   545   171   39

PERCENT TOTAL : 9   2   6   23   24   15   13   9   1

(Question 16)
I	(15)	Requested information source
II	(1)	Concepts
III	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V	(3)	Designs or design techniques
VI	(4)	Experimental processes and procedures
VII	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X	(6)	Performance and characteristics
XI	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII	(12)	Utilization
XIV	(2)	Cost and funding, administrative action

(Question 10)

I   Production Management and Social Sciences
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (26) Production and management
  (28) Psychology and human engineering

II   Medical Sciences
  (16) Medical sciences

III   Mechanical, Industrial, Civil, and Marine Engineering
  (11) Ground transportation equipment
  (13) Installations and constructions
  (18) Military sciences and operations
  (24) Photography and other reproduction processes
  (29) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation

IV   Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided Missiles
  (19) Navigation

V.   Electronics and Electrical Engineering
  (05) Communications
  (06) Detection
  (07) Electrical equipment
  (08) Electronics, electronic equipment

VI   Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (22) Ordnance

VII   Physical Science
  (2) Astronomy, geophysics and geography
  (09) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (25) Physics
  (27) Propulsion systems

VIII   Research and Research Equipment
  (30) Research and research equipment

IX   Mathematics
  (15) Mathematics

CHI-SQUARE (OF TABLE)   714.5431?
DF= 104

VALUES NOT ENTERED1140

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL
DATA AS ENTERED EVEN IF SOME ARE EXCLUDED
FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0537

MEAN(1)= 4.85258   SD(1)= 1.95276
MEAN(2)= 7.21739   SD(2)= 4.77776

Table 3-121 Desired Volume of Transporting Medium vs. Field of Task Output

```
Q22    IS CROSS TABULATED WITH    J10    ON*

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5344

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2      4       1
   1      11      1


( 2)           (EXTREME RIGHT VALUE IS ROW TOTAL)
Q22
   4 *    205    52   151    454    519   277   278   180    15 2193
   T*      4     1     5      9     10     5     5     3     0   41
   P*      9     2     7     22     25    13    13     8     1  100
   C*     41    44    45     36     42    44    41    39    37   41
     *
   3 *    124    33    77    260    258   123   160   106    17 1148
   T*      2     1     1      5      5     2     3     2     0   22
   P*     11     3     7     23     22    11    14     9     1  100
   C*     25    27    20     21     20    19    23    23    33   22
     *
   2 *    134    23   101    395    401   169   218   145    13 1623
   T*      5     0     2      7      8     4     4     3     0   30
   P*      8     1     7     25     25    12    13     9     1  100
   C*     27    19    30     32     31    30    32    31    25   30
     *
   1 *     5    33    17    107     97    44    25    33     3  370
   T*      1     0     0      2      2     1     0     1     0    7
   P*      1     9     4     29     26    12     7     9     1  100
   C*      1    11     5      9      7     7     4     7     6    7
     *
*****************************************************************
( 1)       1           3           5          7          9
J10
                  2           4           6          8

COLUMN    455         335        1195        681         52
TOTAL          221        1251        633        464

PERCENT    8           6          23          12          0
TOTAL               5          23         11          8
```

```
GRAND TOTAL= 5344

CHI-SQUARE ON TABLE 1         47.26774
DF=   24

(THE FOLLOWING STATISTICS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE):

CORRELATION COEFFICIENT= -0.00045
MEAN( 1)=          4.727  SD( 1)=       1.73104
MEAN( 2)=          2.4    SD( 2)=       3.97607
```

(Question 22)
I   (4) All from recall
II.   (1) One report or document
III. (2) A sampling of the reports and documents available
IV   (3) All the reports and documents that could be found
          pertinent to the question

(Question 10)
I.   Production, Management and Social Sciences
         (32) Miscellaneous arts and sciences
         (23) Personnel and training
         (26) Production and management
         (28) Psychology and human engineering

II   Medical Sciences
         (16) Medical sciences

III Mechanical, Industrial, Civil, and Marine Engineering
         (11) Ground transportation equipment
         (13) Installations and constructions
         (18) Military sciences and operations
         (24) Photography and other reproduction processes
         (29) Quartermaster equipment and supplies
         (31) Ships and marine equipment
         (33) Transportation

IV   Aeronautics and space Technology
         (01) Aircraft and flight equipment
         (12) Guided Missiles
         (19) Navigation

V   Electronics and Electrical Engineering
         (05) Communications
         (06) Detection
         (07) Electrical equipment
         (08) Electronics electronic equipment

VI   Chemical Science and Materials
         (03) Chemical warfare equipment and materials
         (04) Chemistry
         (10) Fuels and combustion
         (14) Materials (nonmetallic)
         (15) Metallurgy
         (22) Ordnance

VII Physical Science
         (02) Astronomy, geophysics and geography
         (09) Fluid mechanics
         (20) Nuclear physics and nuclear chemistry
         (21) Nuclear propulsion
         (25) Physics
         (27) Propulsion systems

VIII Research and Research Equipment
         (30) Research and research equipment

IX   Mathematics
         (17) Mathematics

Table 3-122. Desired Detail of Transporting Medium vs. Field of Task Output

```
Q25    IS CROSS TABULATED WITH      J10    SR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5336

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
      2      3      1
      1     11      1


( 2)          (LATKERS RIGHT VALUE IS ROW TOTAL)
Q25
   3 *   196    69    109   410   519   223   267   150    1?  1966
     T*     4     1     2     8    10     4     5     3     0    37
     R*    10     4     6    71    26    11    14     8     1   100
     C*    40    57    33    33    40    35    39    35    35    37
     *
   2 *   253    49   199   765   681   367   363   270    31  2978
     T*     5     1     4    14    13     7     7     5     1    56
     R*     6     2     7    25    23    12    12     9     1   100
     C*    51    40    59    61    53    58    53    58    60    56
     *
   1 *    46     3    27    83    96    44    51    38     4   392
     T*     1     0     1     2     2     1     1     1     0     7
     R*    12     1     7    21    24    11    13    10     1   100
     C*     9     2     8     7     7     7     7     8     *     7
     *
 **********************************************************
 ( 1)     1         3         5         7         9
 J10           2         4         6         8

COLUMN   455       335       1296       681        52
TOTAL         121       1258        634       464

PERCENT    9         6         24        12         0
TOTAL          2         23        11         8

GRAND TOTAL= 5336

CHI-SQUARE (OF TABLE)       54.98700
DF=  16
```

```
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0119
MEAN( 1)=      4.67330   SD( 1)=       1.93074
MEAN( 2)=      2.29413   SD( 2)=       0.59578
```

(Question 25)
I.   (1) A once over lightly
II. (3) A specified answer
III. (2) A detailed analysis

(Question 10)
I   Production Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (3) Personnel and training
     (26) Production and management
     (28) Psychology and human engineering

II   Medical Sciences
     (16) Medical sciences

III Mechanical, Industrial, Civil, and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and construction
     (18) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation

IV   Aeronautics and Space Technology
     (01) Aircraft and flight equipment
     (12) Guided Missiles
     (19) Navigation

V   Electronics and Electrical Engineering
     (05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics electronic equipment

VI   Chemical Science and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance

VII Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (25) Physics
     (27) Propulsion systems

VIII. Research and R search Equipment
     (30) Research and research equipment

IX   Mathematics
     (15) Mathematics

Table 3-123. Desired Layout of Transporting Medium vs. Field of Task Output

```
L27    IS CROSS TABULATED WITH    Q10    GR,
VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1
NUMBER OF REPLICATIONS= 5411
VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       17      2
   1    11      1
```

(EXTREME RIGHT VALUE IS ROW TOTAL)

(Question 27)		
I.	(14)	Recall
II.	(13)	Telephone conversation
III.	(11)	Group discussion
IV.	(4)	Photographs
V.	(3)	Graphics (maps, graphs, etc.)
VI.	(2)	Tables or lists
VII.	(1)	Narrative text
VIII.	(18)	Narrative text and tables or lists
IX.	(9)	Graphics and lists
X.	(8)	Photographs and text
XI.	(7)	Graphics and text
XII.	(16)	Graphics, text and oral
XIII.	(17)	Graphics, text, oral, and recall
XIV.	(12)	Informal briefing, with chalk or pencil drawings
XV.	(5)	Microfilm - microfiche
XVI.	(6)	Slides or motion pictures
XVII.	(10)	Formal briefing or lecture

(Question 10)

I. Production, Management and Social Sciences
   - (32) Miscellaneous arts and sciences
   - (23) Personnel and training
   - (28) Production and management
   - (28) Psychology and human engineering

II. Medical Sciences
   - (16) Medical sciences

III. Mechanical, Industrial, Civil, and Marine Engineering
   - (11) Ground transportation equipment
   - (13) Installations and constructions
   - (18) Military sciences and operations
   - (24) Photography and other reproduction processes
   - (29) Quartermaster equipment and supplies
   - (31) Ships and marine equipment
   - (33) Transportation

IV. Aeronautics and Space Technology
   - (01) Aircraft and flight equipment
   - (12) Guided Missiles
   - (19) Navigation

V. Electronics and Electrical Engineering
   - (05) Communications
   - (06) Detection
   - (07) Electrical equipment
   - (08) Electronics, electronic equipment

VI. Chemical Science and Materials
   - (03) Chemical warfare equipment and materials
   - (04) Chemistry
   - (10) Fuels and combustion
   - (14) Materials (nonmetallic)
   - (17) Metallurgy
   - (22) Ordnance

VII. Physical Science
   - (02) Astronomy, geophysics and geography
   - (09) Fluid mechanics
   - (20) Nuclear physics and nuclear chemistry
   - (21) Nuclear propulsion
   - (25) Physics
   - (27) Propulsion systems

VIII. Research and Research Equipment
   - (30) Research and research equipment

IX. Mathematics
   - (15) Mathematics

Table 3-123. (Continued)

```
  •
3 •   25     5      5     16     27     24     12     19      4    135
T•     C     0      0      0      )      0      0      0      r
R•    18     4      4     1 ,    15     17      9     14            100
C•     5     4      1      1      2      4      2      4      6      3
  •
2 •     6     1      4     17     14     15     17      6            80
T•      0     0      0      0      0      )      0      0             2
P•      6     1      5     21     18     19     21      8            100
C•      1     1      1      1      1      2      4      1             2
  •
1 •    56    15     29    153    154     73     65     53      4    601
T•      1     0      1      3      3      1      1      1      0     11
P•      5     2      5     25     26     12     11      9      1    100
C•     11    13      9     12     12     11     10     11      8     11
  •
   •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)        1            3            5            7            9
Q10               2            4            6            8

COLUMN   454        335        1286        680        52
TOTAL          120        1255        629        462

PERCENT    9         6           24          12          0
TOTAL          2           23          11          8
```

GRAND TOTAL= 5311

CHI-SQUARE (OF TABLE)   737.33150
DF= 128

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0193
MEAN(1)=   4.87272   SD(1)=   1.93247
MEAN(2)=   5.25245   SD(2)=   3.55089

Table 3-124. Class of Information vs. Field of Task Output

Q2R _ IS CROSS TABULATED WITH _ Q10 _ OR_

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5360

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
2   14   1
1   0   1

(2)
Q2R   (EXTREME RIGHT VALUE IS ROW TOTAL)

14 •	12	1	22	37	14	16	9	8	159
7 •	1	0	0	3	1	6	0	6	4
8 •	20	1	14	23	21	10	6	8	160
6 •	4	1	7	3	4	3	1	2	5
13 •	20	7	12	45	14	19	16	36	2 189
7 •	6	0	0	1	1	0	0	1	0 4
8 •	11	5	6	24	6	10	8	16	1 100
6 •	4	6	4	4	4	3	2	6	4
12 •	45	21	25	54	17	40	39	26	1 327
7 •	1	0	0	1	1	1	1	6	6
8 •	14	4	8	17	4	15	12	8	168
6 •	5	17	7	4	5	3	6	6	2 6
11 •	44		10	35	66	56	14	16	223
7 •	1		0	2		1	0	0	4
8 •	21		5	16		25	6	7	160
6 •	5		4	4		9	2	3	4
10 •	102	29	71	335	133	154	130	92	8 1542
7 •	2	1	1	7	6	3	4	2	0 25
8 •	21	24	22	74	25	11	14	7	1 100
6 •				26	26	24	28	36	15 25
9 •	77	6	53	206	243	62	89	77	1 810
7 •	1	0	1	4	1	1	2	1	0 15
8 •	5	0	3	4	43	8	11	0	0 100
6 •	14	5	14	16	1	16	13	16	0 15
8 •	14	8	17	48	41	24	26	7	189
7 •	0	0	0	1	2	0	0	0	4
8 •	10	4	6	21	27	13	14	4	100
6 •	4	7	6	4	4	4	6	2	4
7 •	21	2	6	74	55	17	28	13	235
7 •	0	0	0	1		1	1	6	4
8 •	5	1	2	31		16	12	6	100
6 •	4	5	1	4		5	4	4	4
6 •	11	20	3	15	16	63	29	4	3 187
7 •	0	0	0	0	1	1	0	0	0 4
8 •	5	11	2	8	1	33	16	5	0 100
6 •	3	17	1	1	4	16	4	2	4
5 •	11	1	47	125	18	24	55	27	1 444
7 •	1	0	2	2	2	0	1	1	0 16
8 •	3	1	16	31	14	4	14	5	0 100
6 •	2	4	14	14	14	4	4	4	2 10
4 •	11	1	11	67	4	19	16	114	28 447
7 •	3	0	0	2	1	0	1	2	1 7
8 •	3	1	2	7	4	4	14	36	7 100
6 •	3	4	4	4	4	4	4	36	44 4
3 •	44	16	46	74	65	44	40	16	2 171
7 •	1	0	1	1	1	1	1	0	0 7
8 •	16	6	26	27	16	17	13	6	1 100
6 •	5	16	16	4	16	16	7	4	4 7
2 •	16	6	6	74	67	40	46	16	6 177
7 •	1	0	1	1	1	1	1	1	0 7
8 •	0	1	5	17	24	1	24	1	0 100
6 •	7	1	4	4	4	4	16	12	12 7

. . . .

(1)									
210	1		1	4	6		7	9	0
ROW TOTAL	606		115	1006	634	541		52	
		121		1568			447		
PERCENT TOTAL	0		2		24	11		1	
		4		16	12	11	0		

(Question 28)
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae; computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding; administrative action

(Question 10)
I. Production, Management and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II. Medical Sciences
- (16) Medical sciences

III. Mechanical, Industrial, Civil, and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV. Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided Missiles
- (19) Navigation

V. Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI. Chemical Science and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (10) Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII. Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII. Research and Research Equipment
- (30) Research and research equipment

IX. Mathematics
- (15) Mathematics

Table 3-124. (Continued)

GRAND TOTAL = ...

CHI-SQUARE FOR TABLES ...
DEG. ...

VALUES NOT ENTERED
CASE NO.	VARIABLE 2	VARIABLE 1
...	10	.
...	15	.
...	1.	.
...	.	.
...	14	.
...	12	.
...	.	.
...	.	.
...	.	.
...	.	.
...	.	.
...	.	.
...	.	.
...	.	.
...	1.	.
...	9	.
...	.	.
...	13	.
...	9	.
...	9	.
...	11	.
...	1.	.
...	1.	.

(THE FOLLOWING CORRELATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME MAY BE HIDDEN IN THE ABOVE TABLE)

CORRELATION COEFFICIENT ...
MEAN ...
MEAN ...

Table 3-125. Desired Acquisition Time for Information vs. Actual
Acquisition Time for Information

Q13 IS CROSS TABULATED WITH Q12 OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5355

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)

| | 7 | 6 | 1 |
| | 1 | 7 | 1 |

(2) Q13			(ENTRIES RIGHT VALUE IS ROW TOTAL)							(Question 13)		
			0							I.	(1)	From recall
6 •	30	2	68	70	150	651	10	999		II.	(2)	Less than 1 day
7 •	1	0	1	1	3	12	0	19		III.	(3)	1 – 7 days
8 •	4	0	7	8	15	65	1	100		IV.	(4)	8 – 30 days
9 •	6	67	4	7	15	67	45	19		V.	(5)	31 – 90 days
										VI.	(7)	More than 90 days
5 •	15		46	42	101	179	5	388		(Question 12)		
7 •	0		1	1	2	3	0	7		I.	(1)	From recall
8 •	4		12	11	26	46	1	100		II.	(8)	Task generated
9 •	2		3	3	10	18	23	7		III.	(2)	Less than 1 day
										IV.	(3)	1 – 7 days
4 •	63	1	219	353	685	111	5	1437		V.	(4)	8 – 30 days
7 •	1	0	4	7	13	2	0	26		VI.	(5)	More than 30 days
8 •	4	0	15	25	48	8	0	100		VII.	(7)	Received only part of chunk
9 •	7	33	14	20	68	11	33	26				
3 •	67		427	691	59	23	2	1339				
7 •	1		0	13	1	0	0	25				
8 •	5		37	52	4	2	0	100				
9 •	11		37	57	6	2	0	25				
2 •	78		698	38	12	1		933				
7 •	1		13	1	0	0		16				
8 •	0		84	5	1	1		100				
9 •	13		40	3	1	1		16				
1 •	176		6					182				
7 •	7		0					7				
8 •	98		2					100				
9 •	51		0					7				

(1) Q12	1	2	3	5	6	7		
COLUMN TOTAL	618	3	1574	1303	1037	971	23	
PERCENT TOTAL	12	0	29	22	19	18	0	

GRAND TOTAL = 5355

CHI-SQUARE (OF TABLE) 7784.22208
DF= 30

VALUES NOT ENTERED 1
CASE NO. VARIABLE 2 VARIABLE 1
1087 4 0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES)

CORRELATION COEFFICIENT 0.7179
•MEAN (1)= 3.02959 SD (1)= 1.50397
•MEAN (2)= 3.62069 SD (2)= 1.44503

Table 3-126. Location of First Source for Information vs. Actual
Acquisition Time for Information

Q14   IS CROSS TABULATED WITH   Q12   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5355

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
  2   15   1
  1   7   1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
v15
  15 *   1   15   23   28   31   2 100
  T*   0   0   0   1   1   0   2
  R*   1   15   24   28   31   2 100
  C*   0   1   2   3   3   10   2
     *
  14 *   1   9   16   19   22   67
  T*   0   0   0   0   0   1
  R*   1   13   24   28   33   100
  C*   0   1   1   2   2   1
     *
  13 *   4   8   14   20   46
  T*   0   0   0   1
  R*   7   17   30   43   100
  C*   0   1   1   2   1
     *
  12 *   1   7   6   9   8   51
  T*   0   0   0   0   0   2
  R*   3   23   19   24   26   100
  C*   33   0   0   1   1   1
     *
  11 *   1   21   85   114   99   320
  T*   0   0   2   2   2   5
  R*   0   7   27   36   31   100
  C*   0   1   7   11   10   6
     *
  10 *   7   99   150   103   124   1 495
  T*   0   2   3   2   2   0   9
  R*   1   20   30   21   26   1 100
  C*   1   16   12   10   13   33   9

(Question 14)
I   (01) Received with task assignment
II   (04) Recalled it
III   (09) Searched own collection
IV.   (19) Respondent's action
V   (03) Assigned subordinate to get it
VI.   (05) Asked a colleague
VII   (02) Asked my supervisor
VIII. (08) Requested search of department files
IX   (06) Asked an internal company consultant
X   (10) Searched company TIC
XI   (7)   Requested library search
XII   (15) Requested data from manufacturer vendor, or supplier
XI   (14) Searched manufacturer vendor or supplier sources
XII   (11) Searched an outside library
XIII (16) Asked an external consultant or expert
XIV   (13) Requested search of DOD information/data center
XIV. (12) Searched DOD information data center
XV   (17) Asked customer

(Question 12)
I   (1)   From recall
II   (8)   Task generated
III   (2)   Less than 1 day
IV   (3)   1 - 7 days
V   (4)   8 - 30 days
VI   (5)   More tha 30 days
VII   (7)   Received only part of chunk

  9 *   6   91   156   131   116   3 507
  T*   0   2   3   2   2   0   9
  R*   2   18   31   26   23   1 100
  C*   1   0   13   13   12   14   9
     *
  8 *   10   126   70   57   37   291
  T*   0   2   1   1   1   6
  R*   3   42   24   20   11   100
  C*   2   8   3   6   3   6
     *
  7 *   1   17   21   15   18   72
  T*   0   0   0   0   0   1
  R*   1   24   27   21   25   100
  C*   0   1   2   1   2   1
     *
  6 *   16   116   232   182   133   5 707
  T*   0   4   4   3   3   0   14
  R*   2   25   30   24   18   1 100
  C*   3   13   19   13   14   24   14
     *
  5 *   6   39   60   61   60   1 235
  T*   0   1   1   1   1   0   4
  R*   3   17   23   25   29   0 100
  C*   1   3   5   6   7   9   4
     *
  4 *   3   18   26   30   52   1 130
  T*   0   0   0   1   1   0   3
  R*   2   13   19   26   34   1 100
  C*   0   1   2   3   6   5   3
     *
  3 *   34   1   317   157   165   5   1 695
  1*   1   0   0   3   2   0   0   13
  R*   5   0   46   23   15   12   0 100
  C*   6   33 21   13   10   3   9   13
     *
  2 *   507 1   186   126   81   107 1 1006
  T*   9   0   3   2   2   4   0   19
  R*   50 0   14   12   8   11   0 100
  C*   82 33 13   10   9   11   5   19

  1 *   22   384   67   70   43   574
  T*   0   7   1   1   1   11
  R*   4   67   12   12   9   100
  C*   4   25   6   7   5   11

****
(1)   1   3   5   7
v12
COLUMN   617   1533   1067   21
TOTAL   3   1203   471

PERCENT   11   28   18   0
TOTAL   0   22   15

GRAND TOTAL = 5355

CHI-SQUARE (OF TABLE)   2625.63510
DF = 84

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.3965
MEAN(1)=   3.92941   SD(1)=   1.50051
MEAN(2)=   5.50443   SD(2)=   3.72565

Table 3-127.   Actual Composition of Transporting Medium vs.
Actual Acquisition Time for Information

Q18 IS CROSS TABULATED WITH Q12 OR VARIABLE 1
IS CROSS TABULATED WITH VARIABLE 2
NUMBER OF REPLICATIONS = 10,997

Q18	1	2	3	4	5	6	7	Row Total
27 T R C	33 0 8 3	0 0 0 2	102 1 24 4	119 1 28 5	84 1 20 4	83 1 20 4	2 0 0 9	423 4 100 4
26 T R C	26 0 5 3	0 0 0 0	83 1 17 3	121 1 24 5	125 1 25 5	143 1 29 6	1 0 0 5	499 4 100 4
25 T R C	7 0 6 1	0 0 0 0	27 0 21 1	22 0 17 1	35 0 27 2	37 1 29 2	0 0 0 0	128 1 100 1
24 T R C	60 1 4 6	3 0 0 57	339 3 24 12	324 3 23 13	337 3 23 15	365 3 26 16	5 0 0 23	1,428 13 100 13
23 T P C	0 0 7 1	- 0 0 0	47 1 35 2	23 0 17 1	28 0 21 1	27 0 20 1	0 0 0 0	134 1 100 .
22 T R C	15 : 5 2	0 0 0 0	126 1 39 4	79 1 25 3	43 0 13 2	58 1 18 3	0 0 0 0	321 3 100 3
21 T R C	16 0 6 2	0 0 0 0	84 1 33 3	61 1 24 2	45 0 18 2	48 0 19 2	0 0 0 0	254 2 100 2
20 T R C	2 1 2 0	1 0 0 0	38 1 44 1	17 0 20 1	15 0 17 1	14 0 16 1	0 0 0 0	86 1 100 1
19 T R C	7 0 6 1	0 0 0 0	42 1 36 2	36 0 30 1	20 0 17 1	13 0 11 1	0 0 0 0	118 1 100 1
18 T R C	2 0 1 0	0 0 0 0	37 0 18 1	67 1 32 3	53 1 25 2	50 0 24 2	0 0 0 0	209 2 100 2
17 T H C	3 0 1 0	0 0 0 0	32 0 15 1	63 0 25 2	67 1 32 3	56 1 27 2	0 0 0 0	211 2 100 2
16 T R C	0 0 0 0	0 0 0 0	8 0 14 0	8 0 20 0	8 0 20 0	16 0 39 1	1 0 2 2	41 0 100 20
15 T C	2 0 4 2	0 0 0 0	148 2 43 4	111 1 24 4	75 1 16 3	58 0 13 3	0 0 0 0	461 4 100 4
14 T C	0 0 0 0	0 0 8 0	1 0 0 0	2 0 25 0	6 0 46 0	4 0 31 0	0 0 0 0	13 0 100 0
13 T R C	2 0 0 0	0 0 0 0	2 0 0 0	7 0 25 0	14 0 50 1	3 0 11 0	0 0 0 0	28 0 100 0
12 T R C	0 0 4 0	0 0 0 0	46 1 24 2	43 0 25 2	33 0 21 2	31 0 19 1	0 0 0 0	160 1 100 1

Table 3-127.   (Continued)

	1	2	3	4	5	6	7	Total
11	3	0	16	9	18	8	0	54
T	0	0	0	0	0	0	0	0
R	6	0	30	17	33	14	0	100
C	0	0	0	0	0	0	0	0
10	0	0	7	5	6	10	0	28
T	0	0	0	0	0	0	0	100
R	0	0	25	18	21	36	0	0
C	0	0	0	0	0	0	0	
9	15	0	200	144	124	88	0	571
T	0	0	2	1	1	1	0	5
R	3	0	35	25	22	15	0	100
C	2	0	7	6	5	4	0	5
8	20	1	174	151	183	146	0	675
T	0	0	2	1	2	1	0	6
R	3	0	26	22	27	22	0	100
C								6
7	80	0	91	92	51	65	1	380
T	1	0	1	1	0	0	0	3
R	21	0	24	24	14	17	0	100
C	8	0	3	4	2	3	5	3
6	8	0	53	64	80	92	1	298
T	0	0	0	1	1	1	0	3
R	3	0	18	21	27	31	0	100
C	1	0	2	2	4	3	5	3
5	5	0	11	23	13	38	0	90
T	1	0	0	0	0	0	0	1
R	6	0	12	26	14	42	0	100
C	1	0	0	1	1	2	0	1
4	9	0	57	98	119	140	2	425
T	0	0	1	1	1	1	0	4
R	2	0	13	23	28	33	1	100
C	0	0	2	4	5	6	9	4
3	112	1	600	595	478	475	7	2,268
T	1	0	6	6	4	4	0	21
R	5	0	27	26	21	21	0	100
C	11	17	21	23	21	30	32	21
2	10	0	37	39	55	68	0	209
T	0	0	0	0	1	1	0	2
R	5	0	17	19	26	33	0	100
C	1	0	1	2	2	3	0	2
1	515	1	349	255	177	186	2	1,485
T	5	0	3	2	2	2	0	14
R	35	0	23	17	12	13	0	100
C	52	17	12	10	8	8	9	14
Q12 (Codes)	1	2	3	4	5	6	7	
COLUMN TOTAL	985	6	4,807	2,568	2,287	2,322	22	
PERCENT TOTAL	9.0%	.1%	25.5%	23.3%	20.8%	21.1%	.2%	

(Question 18)

I.	(22)	Previous knowledge
II	(9)	Meetings and symposia
III	(8)	Oral contacts - all other
IV	(7)	Oral contacts with manufacturers
V	(15)	Live demonstrations
VI.	(25)	Physical measurement or experiment
VII.	(24)	Personal notes, logs and files
VIII	(11)	Correspondence, memos and TWX
IX	(4)	Drawings and schematics
X.	(20)	Photographs, maps and files
XI	(5)	Parts lists
XII	(23)	Computer printout
XIII	(26)	Microfilm or microfiche
XIV.	(27)	Slides or motion pictures
XV.	(6)	System specification document
XVI	(14)	Newsletters and other mass media
XVII	(1)	Brochures
XVIII	(2)	Catalogs
XIX.	(3)	Standards and codes
XX.	(10)	Directives
XXI	(12)	Handbooks
XXII.	(13)	Manuals
XXIII	(17)	Proposals
XXIV	(18)	Reports
XXV	(16)	Preprints and reprints
XXVI.	(21)	Journals
XXVII.	(19)	Textbooks

(Question 12)

I	(1)	From recall
II.	(8)	Task generated
III.	(2)	Less than 1 day
IV	(3)	1 - 7 days
V	(4)	8 - 30 days
VI	(5)	More than 30 days
VII	(7)	Received only part of chunk

GRAND TOTAL = 10,997

CHI-SQUARE (OF TABLE) = 90,692.15
DF = 156

CORRELATION COEFFICIENT = .1179

MEAN (1)= 11.404   SD (1) = 9.373

MEAN (2)= 4.111   SD (2) = 1.443

Table 3-128. Actual Volume of Transporting Medium vs. Actual
Acquisition Time for Information

```
     Q21    IS CROSS TABULATED WITH     C12    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5343

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2      4      1
     1      7      1


( 2)            (CATPENE RIGHT VALUE IS ROW TOTAL)      (Question 21)
Q21                                                     I     (4)  All from recall
    4 *     80         450   390   305   350     1575   II.   (1)  One report of document
    T*       1           8     7     0     7       29   III.  (2)  A sampling of the reports and documents available
    R*       5          29    25    15    22      100   IV    (3)  All reports and documents that could be found
    C*      13          29    32    30    36       29                pertinent to the question
      *
    3 *     122    2   372   535   491   502   9 2033    (Question 12)
    T*       2    0     7    10     9     9   0   38     I     (1)  From recall
    W*       6    0    18    26    24    25   0  100     II    (8)  Task generated
    C*      20   o7    24    45    49    52  75   38     III   (2)  Less than 1 day
      *                                                  IV    (3)  1 - 7 days
    2 *     108    1   682   260   202   100   5 1364    V     (4)  8 - 30 days
    T*       2    0    13     5     4     2   0   25     VI    (5)  More than 30 days
    R*       8    0    5,    19    15     8   0  100     VII   (7)  Received only part of chunk
    C*      17   33    44    22    20    11  23   26
      *
    1 *     308         30    17     8     8      371
    T*       6          1     0     0     0        1
    R*      83          8     5     2     2      100
    C*      50          2     1     1     1        7
      *
     ***********************************************
( 1)       1          3         5         7
Q12              2         4         6

COLUMN     618        1534      1006       12
  TOTAL        5         1202       968

PERCENT     11          23        18        0
  TUTAL         0          22         1
```

```
GRAND TOTAL =  5343

CHI-SQUARE ( F TABLE)      2490.40796
DF=  18

(THE FOLLOWING COMPUTATIONS SEC HAS BEEN ALL DATA AS ENTERED
EVEN IF S 4 AS EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0. 739
MEAN( 1)        5.72214    SM  1)-       1.50203
MEAN( 2)-       2.90062    SM  2)=       2.70448
```

Table 3-129.   Actual Detail of Transporting Medium vs. Actual
Acquisition Time for Information

```
  __   Q24   IS CROSS TABULATED WITH     Q12    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5358

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        2      3       1
        1      7       1
```

							(Question 24)		
(2)			(EXTREME RIGHT VALUE IS ROW TOTAL)				I	(1)	A once o er lightly
Q24							II	(3)	A specific answer
3 •	151	1	456	387	356	345	1696	III	(2)	A detailed analysis
T•	3	0	9	7	7	6	32			
R•	9	0	27	23	21	20	100	(Question 12)		
C•	24	33	30	32	35	36	32	I.	(1)	From recall
•								II	(6)	Task generated
2 •	404	2	855	601	452	391	5 2710	III	(2)	Less than 1 day
T•	8	0	16	11	8	7	0 51	IV	(3)	1 - 7 days
R•	15	0	32	22	17	14	0 100	V	(4)	8 - 30 days
C•	65	67	56	50	45	40	23 51	VI	(5)	More than 30 days
•								VII	(7)	Received only part of chunk
1 •	63		223	215	199	235	17 952			
T•	1		4	4	4	4	0 18			
R•	7		23	23	21	25	2 100			
C•	10		15	18	20	24	77 18			

```
  •
 •••••••••••••••••••••••••••••••••••••••••••••••••
( 1)    1           3          5          7
Q12             2          4          6

COLUMN   618        1534       1007       22
TOTAL           3         1203        971

PERCENT   11          28         18          0
TOTAL            0          22         18

GRAND TOTAL= 5358

CHI-SQUARE (OF TABLE)      191.51999
DF=   12
```

```
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0216
MEAN( 1)=        3.92926   SD( 1)=      1.50726
MEAN( 2)=        2.13886   SD( 2)=      0.63922
```

Table 3-130. Class of Information vs. Actual Acquisition Time for Information

G2B   IS CROSS TABULATEC WITH   G12   OR,

VARIABLE   2 IS CROSS TABULATEC WITH VARIABLE   1

NUMBER OF REPLICATIONS= 5357

VARIABLE MAXIMUP MINIPUP (AS SPECIFIED)
```
  2     14      1
  1      7      1
```

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
G2B

```
 14 •   12        25    46    38    35        16C
  T•    0         C     1     1     2          3
  R•    7         16    29    24    24        100
  C•    2         2     4     4     4          3
     •
 13 •   37        37    40    33    42        189
  T•    1         1     1     1     1          4
  R•    20        20    21    17    2?        100
  C•    6         2     3     3     4          4
     •
 12 •   33        57    76    72    90        328
  T•    1         1     1     1     2          6
  R•    10        17    23    22    2?        100
  C•    5         4     6     7     9          6
     •
 11 •   32        5C    53    5C    39        224
  T•    1         1     1     1     1          4
  R•    14        ?3    24    22    17        1CC
  C•    5         3     4     5     4          4
     •
 10 •   129       341   3C7   288   275    9  1349
  T•    2         6     6     5     5     C    25
  R•    1C        25    23    21    2C     1   100
  C•    21        22    2C    29    28    41   25
     •
  9 •   55     ?  362   180   123   90     2  813
  T•    1     C    7     3     2     2     C   15
  R•    7     C    45    22    15    11     0  10C
  C•    9     33   24    15    12    9      9   15
     •
  8 •   3C        45    42    34    36     1  188
  T•    1         1     1     1     1     C    4
  R•    16        24    22    18    19     1  1CC
  C•    5         3     3     3     4     5    4
     •
  7 •   44     1  78    51    36    24     1  235
  T•    1     C    1     1     1     0     0    4
  R•    19     C   33    22    15    10     0  100
  C•    7     33   5     4     4     2     5    4
     •
  6 •   28        38    41    39    39     2  187
  T•    1         1     1     1     1     C    3
  R•    15        2C    22    21    21     1  1CC
  C•    5         2     3     4     4     9    3
     •
  5 •   98     1  185   113   99    90     1  547
  T•    1     C    3     2     2     2     C   1C
  R•    11     C   34    21    18    16     C  100
  C•    9     33   12    9     10    9     5   1C
     •
  4 •   77        126   78    51    52     3  387
  V•    1         2     1     1     1     C    7
  R•    20        33    20    13    13     1  1CC
  C•    12        8     6     5     5     14   7
     •
  3 •   13        93    1C5   68    92     1  372
  T•    0         2     2     1     2     C    7
  R•    3         25    28    18    25     0  10C
  C•    2         6     9     7     9     5    7
     •
  2 •   7C        97    71    76    62     2  378
  T•    1         2     1     1     1     C    7
  R•    19        26    19    2C    16     1  10C
  C•    11        6     6     8     6     9    7
     •
```
●●●
```
 ( 1)     1         3         5         7
 G12            2         4         6

 COLUMN   618       1534      19 7      22
 TOTAL         3         2C3       97C

 PERCENT  11        28        18
 TOTAL         C         22        18
```

(Question 2B)
```
 II     (1)    Concepts
 III    (8)    Raw data
 IV     (-)    Math aids and formulae, computer programs
 V      (3)    Designs or design techniques
 VI     (5)    Experimental processes and procedures
 VII    (11)   Test processes and procedures
 VIII   (19)   Evaluation
 IX     (9)    Specifications
 X      (6)    Performance and characteristics
 XI     (7)    Production processes and procedures
 XII    (10)   Technical status
 XIb    (12)   Utilization
 XIV    (2)    Cost and funding, administrative action
```

(Question 12)
```
 I      (1)    From recall
 II     (8)    Task generated
 III    (2)    Less than 1 day
 IV     (3)    1 - 7 days
 V      (4)    8 - 30 days
 VI     (5)    More than 30 days
 VII    (7)    Received only part of chunk
```

GRAND TOTAL= 5357

CHI-SQUARE (OF TABLE)   368.99263
DF= 72

(THE FOLLOWING COMPUTATICNS ARE BASED ON ALL DATA AS ENTERED EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   C.0514
```
MEAN( 1)=     3.92888   SD( 1)=     1.50713
MEAN( 2)=     7.90181   SD( 2)=     3.31652
```

Table 3-131. Field of Information vs. Actual Acquisition Time for Information

```
    Q29     IS CROSS TABULATED WITH      Q12      OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE   1

NUMBER OF REPLICATIONS= 5353

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2       9       1
    1       7       1
```

(2)			(EXTREME RIGHT VALUE IS ROW TOTAL)					
Q29								
9 •	43		46	37	22	19	2	169
T•	1		4	1	0	0	0	3
R•	25		27	22	13	11	1	100
C•	7		3	3	2	2	9	3
•								
8 •	68		140	97	77	66		448
T•	1		3	2	1	1		8
R•	15		31	22	17	15		100
C•	11		9	9	8	7		8
•								
7 •	68		242	158	128	146	4	746
T•	1		5	3	2	3		14
R•	9		32	21	17	20	1	100
C•	11		16	13	13	15	18	14
•								
6 •	91		177	145	138	154	7	712
T•	2		3	3	3	3	0	13
R•	13		25	20	19	22	1	100
C•	15		12	12	14	16	32	13
•								
5 •	134		377	305	242	230	3	1291
T•	3		7	6	5	4	0	24
R•	10		29	24	19	18	0	100
C•	22		25	26	24	24	14	24
•								
4 •	87	2	282	209	186	132	2	900
T•	2	0	5	4	3	2	0	17
R•	10	0	31	23	23	15	0	100
C•	14	67	18	17	19	14	9	17
•								
3 •	42	1	89	74	67	81	1	355
T•	1	0	2	1	1	2	0	7
R•	12	0	25	21	19	23	0	100
C•	7	33	6	6	7	8	5	7
•								
2 •	14		17	18	18	27	1	95
T•	0		0	0	0	1	0	2
R•	15		18	19	19	28	1	100
C•	2		1	2	2	3	5	2
•								
1 •	67		159	153	125	111	2	617
T•	1		3	3	2	2	0	12
R•	11		26	25	20	18	0	100
C•	11		10	13	12	11	9	12

```
  •••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)     1           3          5          7
Q12           2          4          6

COLUMN  614      1529      1003        22
TOTAL        3        1196       966

PERCENT   11        28        18         0
TOTAL         0        22        18

GRAND TOTAL = 5353

CHI-SQUARE (OF TABLE)     126.42188
DF=  48

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0487
MEAN( 1)=     3.92990   SD( 1)=    1.50677
MEAN( 2)=     4.97394   SD( 2)=    2.09827
```

(Question 9)

I   Production, Management and Social Sciences
- (32) Miscellaneous arts and sciences
- (23) Personnel and training
- (26) Production and management
- (28) Psychology and human engineering

II   Medical Sciences
- (16) Medical sciences

III   Mechanical, Industrial, Civil and Marine Engineering
- (11) Ground transportation equipment
- (13) Installations and constructions
- (18) Military sciences and operations
- (24) Photography and other reproduction processes
- (29) Quartermaster equipment and supplies
- (31) Ships and marine equipment
- (33) Transportation

IV   Aeronautics and Space Technology
- (01) Aircraft and flight equipment
- (12) Guided missiles
- (19) Navigation

V   Electronics and Electrical Engineering
- (05) Communications
- (06) Detection
- (07) Electrical equipment
- (08) Electronics, electronic equipment

VI   Chemical Science and Materials
- (03) Chemical warfare equipment and materials
- (04) Chemistry
- (10) Fuels and combustion
- (14) Materials (nonmetallic)
- (17) Metallurgy
- (22) Ordnance

VII.   Physical Science
- (02) Astronomy, geophysics and geography
- (09) Fluid mechanics
- (20) Nuclear physics and nuclear chemistry
- (21) Nuclear propulsion
- (25) Physics
- (27) Propulsion systems

VIII.   Research and Research Equipment
- (30) Research and research equipment

IX   Mathematics
- (15) Mathematics

(Question 12)

I.	(1)	From recall
II	(8)	Task generated
III	(2)	Less than 1 day
IV	(3)	1 - 7 days
V	(4)	8 - 30 days
VI	(5)	More than 30 days
VII.	(7)	Received only part of chunk

Table 3-132. Location of First Source for Information vs. Desired
Acquisition Time for Information

014   IS CROSS TABULATED WITH _____ 013 _____ OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED) _____
2   15   1
1   6   1

(Question 14)
I	(01)	Received with task assignment
II	(04)	Recalled it
III.	(09)	Searched own collection
IV.	(19)	Respondent's action
V.	(03)	Assigned subordinate to get it
VI	(05)	Asked a colleague
VII.	(02)	Asked my supervisor
VIII	(08)	Requested search of department files
IX	(06)	Asked an internal company consultant
X	(10)	Searched company TIC
X	(7)	Requested library search
XI	(15)	Requested data from manufacturer, vendor, or supplier
XI.	(14)	Searched manufacturer, vendor, or supplier sources
XII	(11)	Searched an outside library
XIII.	(18)	Asked an external consultant or expert
XIV	(12)	Searched DOD information/data center
XV.	(17)	Asked customer

(Question 13)
I	(1)	From recall
II.	(2)	Less than 1 day
III.	(3)	1 – 7 days
IV.	(4)	8 – 30 days
V.	(5)	31 – 90 days
VI	(7)	More than 90 days

CHI-SQUARE (CF TABLE)   1500.86932
DF= 70

VALUES NOT ENTERED   2
CASE NO.   VARIABLE 2   VARIABLE 1
1303   0   5
4385   0   2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.2949
MEAN(1)=   3.67069   SD(1)=   1.49103
MEAN(2)=   5.66169   SD(2)=   3.73006

GRAND TOTAL= 5357

Table 3-133. Desired Class of Information vs. Desired Acquisition Time for Information

Q16   IS CROSS TABULATED WITH   Q13   ON.

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)

	MAXIMUM	MINIMUM
2	14	1
1	6	1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)

Q16

14 •	29	63	101	116	34	90	427
T•	1	1	2	3	1	2	10
P•	7	15	24	26	8	21	100
C•	11	9	9	10	11	12	10
13 •	26	31	46	44	9	31	187
T•	1	1	1	1	0	1	4
R•	14	17	25	24	5	17	100
C•	10	5	4	4	3	4	4
12 •	19	47	103	183	41	121	524
T•	0	1	2	4	1	3	12
R•	4	11	20	35	8	23	100
C•	7	8	9	16	14	15	12
11 •	6	14	25	28	10	23	106
T•	0	0	1	1	0	1	2
P•	6	13	24	26	9	22	100
C•	2	2	2	3	3	3	3
10 •	53	176	330	336	82	248	1225
T•	1	4	8	8	2	6	29
P•	4	14	27	27	7	20	100
C•	20	26	30	30	27	32	29
9 •	29	125	143	112	33	48	490
T•	1	3	3	3	1	1	12
R•	6	26	29	23	7	10	100
C•	11	18	13	10	11	6	12
8 •	20	36	46	38	14	32	186
T•	0	1	1	1	0	1	4
P•	11	19	25	20	8	17	100
C•	8	5	4	3	5	4	4
7 •	22	35	40	31	5	22	159
T•	1	1	1	1	0	1	4
R•	14	25	25	19	3	14	100
C•	8	6	4	3	2	3	4
6 •	4	1	3	10	2	16	36
T•	0	0	0	0	0	0	1
P•	11	3	8	28	6	44	100
C•	2	0	0	1	1	2	1
5 •	30	86	121	116	38	57	448
T•	1	2	3	3	1	1	11
P•	7	19	27	26	8	13	100
C•	11	13	11	10	13	7	11
4 •	17	29	36	31	16	33	165
T•	0	1	1	1	0	1	4
P•	10	18	24	19	10	20	100
C•	6	4	4	3	5	4	4
3 •	3	6	15	1	4	12	55
T•	0	0	0		0	0	1
P•	5	11	27	26	3	22	100
C•	1	1	1	1	2	2	1
2 •	4	6	13	12	1	11	47
T•	0	0	0	0	1	0	1
P•	9	13	28	26	2	23	100
C•	2	1	1	1	0	1	1
1 •	3	15	47	51	11	32	179
T•	0	0	2	1	0	1	4
P•	2	8	37	28	5	18	100
C•	1	2	4	5	4	4	4

(1)   1   3   5

Q13   2   4   6

COLUMN TOTAL   245   584   1092   1116   301   776

PERCENT TOTAL   6   16   20   26   7   14

(Question 16)

I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding administrative action

(Question 13)

I	(1)	From recall
II.	(2)	Less than 1 day
III.	(3)	1 - 7 days
IV	(4)	8 - 30 days
V.	(5)	31 - 90 days
VI.	(7)	More than 90 days

GRAND TOTAL= 4234

CHI-SQUARE (OF TABLE)   246.34430
DF= 65

VALUES NOT ENTERED 1125

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

CORRELATION COEFFICIENT   0.0224
MEAN(1)=   3.67165   SD(1)=   1.49103
MEAN(2)=   7.21730   SD(2)=   4.77774

Table 3-134. Usual Composition of Transporting Medium vs. Desired Acquisition Time for Information

```
Q19     IS CROSS TABULATED WITH     Q13     OR,

VARIABLE   2 IS CROSS TABULATED WITH VARIABLE   1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        3        1
    1        6        1

                 - X -
( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q19                                                    (Question 19)
    3 •    51    121   239   248    65   183  907       I      (3)   None indicated in Question 18
    T•      1      2     4     5     1     3   17        II.    (1)   Same as those indicated in Question 18
    ••      6     13    26    27     ?    20  100        III.   (2)   Same as those indicated in Question 18 and other media
    C•     13     15    18    17    17    18   17
    •
    2 •   325    695  1054  1127   307   787 4295        (Question 13)
    T•      6     13    20    21     6    15   80        I.     (1)   From recall
    ••      8     16    25    26     7    18  100        II.    (2)   Less than 1 day
    C•     85     83    79    79    79    79   80        III.   (3)   1 - 7 days
    •                                                    IV.    (4)   8 - 30 days
    1 •     6     17    44    43    16    29  157        V.     (5)   31 - 90 days
    T•      0      0     1     1     0     1    3        VI.    (7)   More than 90 days
    R•      6     11    29    27    10    18  100
    C•      2      2     3     3     4     3    3
    •
        ••••••••••••••••••••••••••••••••••••••••
( 1)      1          3          5
Q13                2          4          6

COLUMN  382        1319        388
 TOTAL        933        1413        999

PERCENT    7          25         7
 TOTAL          16         26         19

GRAND TOTAL=  5359

CHI-SQUARE (OF TABLE)       18.56426
DF=   10
```

```
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0701
MEAN( 1)=      3.67055   SD( 1)=      1.49103
MEAN( 2)=      2.13935   SD( 2)=      0.42307
```

Table 3-135. Desired Volume of Transporting Medium vs. Desired
Acquisition Time for Information

C22   IS CROSS TABULATED WITH   Q13   no.

VARIABLE   2 IS CROSS TABULATED WITH VARIABLE   1

NUMBER OF REPLICATIONS= 5357

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2   4   1
    1   6   1

C 22				ENTERED RIGHT VALUE IS PER TOTAL						
4 .	47	253	578	544	177	549	2296	I.	(1)	All from recall
To	1	5	11	11	3	15	41	II.	(3)	One report or document
P.	2	11	24	27	9	25	107	III.	(5)	A sampling of the reports and documents available
C.	12	30	43	42	44	54	41	IV.	(7)	All the reports and documents that could be found
.										pertinent to the question
3 .	45	94	277	357	110	257	1154	(Question 13)		
To	1	7	5	7	2	5	27			
P.	5	9	24	31	10	22	100	I.	(1)	From recall
C.	15	11	21	25	28	26	72	II.	(3)	Less than 1 day
.								III.	(5)	1 - 7 days
2 .	72	474	430	494	93	144	1625	IV.	(6)	8 - 30 days
To	1	9	9	9	7	3	30	V.	(6)	31 - 90 days
E.	4	24	27	27	4	15	100	VI.	(7)	More than 90 days
C.	19	51	32	31	24	14	95			
.										
1 .	204	62	47	43	7	20	373			
To	4	1	1	4	0	4	7			
P.	44	17	13	9	2	5	100			
C.	54	7	4	2	2	2	7			

●●●

(1)	1		3		4		
Q13		2		4		6	

COLUMN   392   1339   4×7
TOTAL   833   1419   444

PERCENT   7   25   7
TOTAL   16   24   19

GRAND TOTAL= 5357

CHI-SQUARE (OF TABLE)   1734.00491
DF=   15

VALUES NOT ENTERED   2
    CASE NO.   VARIABLE   2   VARIABLE   1
    458   0   7
    1303   0   5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES).

CORRELATION COEFFICIENT   0.3210
MEANS 1)=   3.47045   SD 1)=   1.49121
MEANS 2)=   2.96742   SD 2)=   0.99780

Table 3-136. Desired Detail of Transporting Medium vs. Desired
Acquisition Time for Information

```
    Q25    IS CROSS TABULATED WITH      Q13    GR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF APPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        3        1
    1        6        1


  ( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
 Q25                                                        (Question 25)
    1 •   105  295  421  581  157   413 1972        I    (1)  A once over lightly
    T•     2    6    8   11    3     9   37         II   (3)  A specified answer
    P•     5   15   21   29    8    21  100         III.  (2)  A detailed analysis
    C•    28   35   31   41   40    41   37
    •                                               (Question 13)
    2 •   745  482  824  739  702   501 2993        I.   (1)  From recall
    T•     5    9   15   14    4     9   56         II   (2)  Less than 1 day
    R•     8   16   28   25    7    17  100         III. (3)  1 - 7 days
    C•    44   58   62   52   52    50   56         IV   (4)  8 - 30 days
    •                                               V    (5)  31 - 90 days
    1 •    31   56   94   58   29    85  393        VI   (7)  More than 90 days
    T•     1    1    2    2    1     2    7
    R•     8   14   24   25    7    22  100
    C•     8    7    7    7    7     9    7
    •
       ••••••••••••••••••••••••••• ••••••••••••••••••
  ( 1)     1         3        5
 Q13             2         4        6

COLUMN   381        1339       388
 TOTAL        833        1418       999

PERCENT    7         25        7
 TOTAL        16         26        19

GRAND TOTAL=  5358

CHI-SQUARE (OF TABLE)       60.20091
DF=  10
```

```
VALUES NOT ENTERED    1
   CASE NO.    VARIABLE  2     VARIABLE  1
    5307            0              1

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.0593
MEAN(  1)=     3.67065    SD(  1)=     1.49103
MEAN(  2)=     2.29427    SD(  2)=     0.59626
```

Table 3-137. Why First Source Used vs. Location of First Source for Information

```
   G15    IS CROSS TABULATED WITH      G14

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        6      1
    1       15      1
```

```
( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q15
 6 *    4    491   205    14    28   154    10   114    69   115    32     5     1    19    13 1274
 T*     0     9     4     0     1     3     0     2     1     2     1     0     0     0     0   24
 R*     0    39    16     1     2    12     1     9     5     9     3     0     0     1     1  100
 C*     1    49    30    11    12    20    14    38    14    23    10    16     2    28    13   24

 5 *   13    20    31    66    30    67    11    32    74    46    72     4     7     8    27  508
 T*     0     0     1     1     1     1     0     1     1     1     1     0     0     0     1    9
 R*     3     4     6    13     6    13     2     6    15     9    14     1     1     2     5  100
 C*     2     2     4    50    13     9    15    11    15     9    22    13    15    12    27    9

 4 *   18    48    83    37    57   290    23    31   255    77   168     6    28    28    44 1193
 T*     0     1     2     1     1     5     0     1     5     1     3     0     1     1     1   22
 R*     2     4     7     3     5    24     2     3    21     6    14     1     2     2     4  100
 C*     3     5    12    28    24    38    32    10    50    16    52    19    61    42    44   22

 3 *    1    32    48     7    52    58    10     9    32    81    21     3     5     7     2  368
 T*     0     1     1     0     1     1     0     0     1     2     0     0     0     0     0    7
 R*     0     9    13     2    14    16     3     2     9    22     6     1     1     2     1  100
 C*     0     3     7     5    22     8    14     3     6    16     7    10    11    10     2    7

 2 *    4   410   318     8    67   188    15   110    72   175    27    13     4     5    10 1426
 T*     0     8     6     0     1     4     0     2     1     3     1     0     0     0     0   27
 R*     0    29    22     1     5    13     1     8     5    12     2     1     0     1     1  100
 C*     1    41    46     6    28    25    21    37    14    35     8    42     9     7    10   27

 1 *  536     8     9     1     2    10     3     1     4     1                 1           4  580
 T*    10     0     0     0     0     0     0     0     0     0                 0           0   11
 R*    92     1     2     0     0     2     1     0     1     0                 0           1  100
 C*    93     1     1     1     1     1     4     0     1     0                 2           4   11
```

```
 ( 1)        1           3           5           7           9          11          13          15
 Q14              2           4           6           8          10          12          14

COLUMN    576         694         236          72         506         320          46         100
TOTAL         1009        133         767         297         495          31          67

PERCENT    11          13           4           1           9           6           1           2
TOTAL          19           2          14           6           9           1           1

GRANC TOTAL= 5349

CHI-SQUARE (OF TABLE)       6434.87231
DF=   70

VALUES NOT ENTERED  10
  CASE NO.     VARIABLE  2      VARIABLE  1
     81            0                4
    250            0                9
   1303            0                0
   1985            0                4
   2339            0                4
   3018            0                6
   3397            0                6
   4025            0                3
   4321            0                3
   4389            4                0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2208
MEAN( 1)=      5.66169   SD( 1)=      3.73006
MEAN( 2)=      3.63799   SD( 2)=      1.74620
```

Table 3-138. Desired Class of Information vs. Location of First Source for Information

```
    Q16    IS CROSS TABULATED WITH      Q14      OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      15       1
    1      15       1


( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q16
  1 •    60    70    46     7    34    71     6    12    50    25    23     1     3     6    11   427
  T•      1     2     1     0     1     2     0     0     1     1     1     0     0     0     0    10
  R•     14    15    11     2     6    17     1     3    12     6     5     0     1     1     3   100
  C•     12    10     8     6    18    12    10     5    12     6    10     6    13    12    13    10
    •
 13 •    13    52    24     4     5    38     2     5    11    14     8           3     4     4   187
  T•      0     1     1     0     0     1     3     0     0     0     0           0     0     0     4
  R•      7    28    13     2     3    20     1     3     6     7     4           2     2     2   100
  C•      3     7     4     3     3     6     3     2     3     3     3           8     8     5     4
    •
 12 •    27    65    86     9    25    64     4    41    26   198    38     2    12    10     2   524
  T•      1     2     2     0     1     2     0     1     1     3     1     0     0     0     0    12
  R•      5    12    16     2     5    12     1     8     5    21     7     0     2     2     1   100
  C•      5     9    16     8    13    10     7    18     7    28    16    12    32    20     6    12
    •
 11 •     9    22     4     5     9    13     4     5    17     6     9           3                106
  T•      0     1     0     0     0     0     0     0     0     0     0           0                  3
  R•      8    21     4     5     8    12     4     5    16     6     8           3                100
  C•      2     3     1     4     5     2     7     2     4     1     4           8                  3
    •
 10 •   133   173   176    48    41   193    13    66   138    98    91     8     7     9    30  1324
  T•      3     4     4     1     1     5     0     2     3     2     2     0     0     0     1    29
  R•     11    14    14     4     3    16     1     5    11     8     7     1     1     1     2   100
  C•     26    24    32    41    22    31    22    29    34    24    39    47    18    18    36    29
    •
  9 •   149    52    58     4    13    42     7    30    55    30    23     1     1     7    18   490
  T•      4     1     1     0     0     1     0     1     1     1     1     0     0     0     0    12
  R•     30    11    12     1     3     9     1     6    11     6     5     0     0     1     4   100
  C•     29     7    11     3     7     7    12    13    13     7    10     6     3    14    21    12
    •
  8 •    22    50    17    13    15    21     1    10    11     9    10     2     2     1     2   186
  T•      1     1     0     0     0     0     0     0     0     0     0     0     0     0     0     4
  R•     12    27     9     7     8    11     1     5     6     5     5     1     1     1     1   100
  C•      4     7     3    11     8     3     2     4     3     2     4    12     5     2     2     4
    •
  7 •    24    47    16     2     3    28     1     9    14    12     2                             259
  T•      1     1     0     0     0     1     0     0     0     0     0                               4
  R•     15    30    10     1     2    18     1     6     9     8     1                             100
  C•      5     6     3     2     2     5     2     4     3     3     1                               4
    •
  6 •     2    13     7     3           4           1     1     4                             1    36
  T•      0     0     0     0           0           0     0     0                             0     1
  R•      0    36    19     8          11           3     3    11                             3   100
  C•      0     2     1     3           1           0     0     1                             1     1
    •
  5 •    47   106    48    14    16    63     5    31    52    31    21           1     6     7   448
  T•      1     3     1     0     0     1     0     1     1     1     1           0     0     0    11
  R•     10    24    11     3     4    14     1     7    12     7     5           0     1     2   100
  C•      9    15     9    12     9    10     9    14    13     8     9           3    12     8    11
    •
  4 •     0    44    35     1     8    30           2     9    18     4     1                 1   165
  T•      0     1     1     0     0     1           0     0     0     0     0                 0     4
  R•      0    27    21     1     5    18           1     5    11     2     1                 1   100
  C•      2     6     6     1     4     5           1     2     4     2     6                 2     4
    •
  3 •     9     7     7     3     8     7     1     4     2     4                       2     1    55
  T•      0     0     0     0     0     0     0     0     0     0                       0     0     1
  R•     16    13    13     5    15    13     2     7     4     7                       4     2   100
  C•      2     1     1     3     4     1     2     2     0     1                       5     1     1
    •
  2 •     3    14     7     1     1     6           2     3     9     1                            47
  T•      0     0     0     0     0     0           0     0     0     0                             1
  R•      6    30    15     2     2    13           4     6    19     2                           100
  C•      1     2     1     1     1     1           1     1     2     0                             1
    •
  1 •     9    11    16     2     9    33    14     9    17    40     6     2     2     7     2   179
  T•      0     0     0     0     0     1     0     0     0     1     0     0     0     0     0     4
  R•      5     6     9     1     5    18     8     5     9    22     3     1     1     4     1   100
  C•      2     2     3     2     5     5    24     4     4    10     3    12     5    14     2     4
    •
••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)     1           3           5           7           9          11          13          15
Q14           2           4           6           8          10          12          14

COLUMN   517         547         187         58          408         236         38          84
 TOTAL        726         116         613        227         408         17          51

PERCENT   12          13           4           1          10           6           1           2
 TOTAL        17           3          14           5          10           0           1
```

Table 3-138. (Continued)

GRAND TOTAL= 4233

CHI-SQUARE (OF TABLE)_ ____807.77379 _. _ ___ . :
OF= 182

VALUES NOT ENTERED1126

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0090
MEAN(1)=   5.66169   SD(1)=   3.7300w
MEAN(2)=   7.21739   SD(2)=   4.77774

(Question 16)			(Question 14)		
I.	(15)	Requested information source	I.	(01)	Received with task assignment
II.	(1)	Concepts	II.	(04)	Recalled it
III.	(8)	Raw data	III.	(09)	Searched own collection
IV.	(5)	Math aids and formulae, computer programs	IV.	(19)	Respondent's action
V.	(3)	Designs or design techniques	V.	(03)	Assigned subordinate to get it
VI.	(4)	Experimental processes and procedures	VI	(05)	Asked a colleague
VII.	(11)	Test processes and procedures	VII.	(02)	Asked my supervisor
VIII.	(13)	Evaluation	VIII.	(08)	Requested search of department files
IX.	(9)	Specifications	IX.	(06)	Asked an internal company consultant
X.	(6)	Performance and characteristics	X.	(10)	Searched company TIC
XI.	(7)	Production processes and procedures	X.	(7)	Requested library search
XII.	(10)	Technical status	XI	(15)	Requested data from manufacturer, vendor, or supplier
XIII.	(12)	Utilization	XI.	(14)	Searched manufacturer, vendor, or supplier sources
XIV.	(2)	Cost and funding, administrative action	XII.	(11)	Searched an outside library
			XIII.	(16)	Asked an external consultant or expert
			XIV.	(13)	Requested search of DOD information/data center
			XIV.	(12)	Searched DOD information/data center
			XV.	(17)	Asked customer

Table 3-139. Acquisition From First Source vs. Location of First Source for Information

```
        C17    IS CROSS TABULATED WITH      Q14    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      5        1
    1      15       1


( 2)
Q17          (EXTREME RIGHT VALUE IS ROW TOTAL)
  5 •   356   495   277   66   157   325   21   136   261   169   137   15   2C   29   48 2914
  T•      7     9     5    1     3     6    0     3     5     3     3    0    C    1    1   47
  R•     14    20    11    3     6    13    1     5    1C    7     1    1    1    1    2  1C0
  C•     62    49    40   49    67    42   29    46    52   34    43   48   43   43   48   47
    •
  4 •   210   485   384   45    74   361   34   142   212   257   177   15   21   32   43 2512
  T•      4     9     7    1     1     3    1     3     5     3     3    0    0    1    1   47
  R•      8    19    15    3     3    14    1     6     8   10     7    1    1    1    3  1C0
  C•     36    48    55   48    31    47   47    48    42   52    55   48   46   48   43   47
    •
  3 •     7    26    26    3     2    66   14    11    23   44     4    1    3    3    9  236
  T•      0     0     0    0     0     1    0     0     0    1     0    0    C    0    0    4
  R•      3    11    11    1     1    28    6     5    10   19     2    0    1    1    1  1C0
  C•      1     3     4    2     1     9   19     4     5    9     1    3    7    4    2    4
    •
  2 •                 6     2     2    10    3     6     4   14     1         2         4   58
  T•            0     0    0     0     0    0     0     0    0                c         0    1
  R•           .0    3    3     3    17    5    10    10   28     2              3     7  1C0
  C•            1    1    1     1     1    5     4     2    3     0              4         1
    •
  1 •     3     3     3               1     7         2     2     9    1                3    2   37
  T•      0     0     0               0     0         0     0     0    0                0    0    1
  R•      8     8     8               3    19         5     6   24     3                8    5  1C0
  C•      1     0     0               0     1         1     1    2     0                4    2    1
    •
( 1) •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
Q14      1           3           5           7           9          11          13          15
              2           4           6           8          10          12          14


COLUMN   576         696         236         72         507         320         46         1C0
TOTAL        1C09        136         769        297        495         31          67

PERCENT   11          13          4           1          9           6           1          2
TOTAL        19           3          14          6          9          1          1

GRAND TOTAL= 5357
```

CHI-SQUARE (OF TABLE)   355.63380
DF= 56

VALUES NOT ENTERED   2
  CASE NO.   VARIABLE   2   VARIABLE 1
   1303   2   0
   4389   4   0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.1036
MEAN(1)=   5.66169   SD(1)=   3.73006
MEAN(2)=   4.38235   SD(2)=   C.68792

(Question 17)
I	(4)	Irrelevant or inappropriate information
II	(5)	Nothing
III	(3)	Reference to another source
IV	(2)	Part of the information
V.	(1)	All the information needed

(Question 14)
I.	(01)	Received with task assignment
II	(04)	Recalled it
III	(09)	Searched own collection
IV.	(19)	Respondent's action
V	(03)	Assigned subordinate to get it
VI	(05)	Asked a colleague
VII	(02)	Asked my supervisor
VIII	(08)	Requested search of department files
IX	(06)	Asked an internal company consultant
X	(10)	Searched company TIC
X.	(7)	Requested library search
XI	(15)	Requested data from manufacturer, vendor, or supplier
XI	(14)	Searched manufacturer, vendor, or supplier sources
XII.	(11)	Searched an outside library
XIII	(16)	Asked an external consultant or expert
XIV.	(13)	Requested search of DOD information/data center
XIV	(12)	Searched DOD information/data center
XV	(17)	Asked customer

Table 3-140. Desired Volume of Transporting Medium vs. Location of First Source for Information

```
Q22    IS CROSS TABULATED WITH      Q14    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM PINIMUM  (AS SPECIFIED)
    2      5       1
    1     15       1


( 2)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q22
  4 .   191   253   300    54   102   288    29   156   221   318   167    17    26    36    46  2204
  T.      4     5     6     1     2     5     1     3     4     6     3     0     C     1     1    41
  R.      9    11    14     2    -5    13     1     7    10    14     8     1     1     2     2   1C0
  C.     33    25    43    40   -43    38    40    53    44    44    52    55    57    54    44    41
    .
  3 .    56   236   195    29    52   211    13    48    97   101    59     7     6    12    13  1154
  T.      1     4     4     1     1     4     0     1     2     2     1     0     C     0     0    22
  R.      5    20    17     2     5    18     1     6     8     9     5     1     1     1     1   1C0
  C.     10    23    28    21    22    27    18    23    19    20    18    23    13    18    13    22
    .
  2 .   324   174   189    53    80   264    30    73   187    76    54     7    14    19    41  1625
  T.      6     3     4     1     1     5     1     1     3     1     2     0     C     0     1    30
  R.     20    11    12     3     5    16     2     4    12     5     4     0     1     1     3   1C0
  C.     56    17    27    39    34    34    42    25    37    15    29    23    30    28    41    30
    .
  1 .     5   346    12     1     2     5                 2                               373
  T.      0     6     0     0     0     0                 0                                 7
  R.      1    93     3     0     1     1                 1                               1C0
  C.      1    34     2     1     1     1                 0                                 7
    .
........................................................................................
( 1)     1           3           5           7           9          11          13          15
Q14            2           4           6           8          10          12          14

COLUMN   576         696         236          72         507         320          46         10C
TOTAL        1C09         136         768         297         495          31          67

PERCENT   11          13           4           1           9           6           1           2
TOTAL        19           3          14           6           9           1           1
```

```
GRAND TOTAL= 5356

CHI-SQUARE (OF TABLE)      1825.99649
DF=  42

VALUES NOT ENTERED   3
  CASE NO.     VARIABLE  2     VARIABLE  1
    458            0               6
   1303            0               0
    389            4               0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2385
MEAN( 1)=     5.66169    SD( 1)=      3.73006
MEAN( 2)=     2.96190    SD( 2)=      0.997AC
```

Table 3-141. Actual Detail of Transporting Medium vs. Location of First Source for Information

```
   V2*    IS CROSS TABULATED WITH    C14    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS* 5357

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2      3      1
     1     18      1


: 21            (LEFTMOST RIGHT VALUE IS ROW TOTAL)
V24
   3 *   184   284   244    47    94   206    20   108   133   102    87    11    17    23    27 1697
   T*      3     5     5     1     2     3     1     2     2     3     2     0     0     C     1   32
   R*     11    17    16     3     6    12     2     6     8    11     5     1     1     1     2  100
   C*     32    30    49    45    4C    27    39    36    26    37    27    35    37    34    27   32

   2 *   287   595   427    66   162   385    32   157   246   190   178    15    19    24    48 2709
   T*      5    11     4     1     2     7     1     3     5     4     3     0     0     0     1   51
   R*     11    22    12     2     4    14     1     6    11     7     7     1     1     1     2  100
   r *    50    59    47    49    43    50    44    53    56    38    56    48    41    34    49   51

   1 *   165   130   121    73    40   182    12    32    88   123    55     5    17    20    25  951
   T*      2     2     7     0     1     3     0     1     7     2     1     0     0     0     0   18
   P*     11    14    11     2     4    19     1     3     9    13     6     1     2     2     3  100
   C*     18    13    15    17    17    24    17    11    17    25    17    16    22    30    25   18

   ****************************************************************************************************
   V11        1         3         5         7         9        11        13        15
   Q14        1         2         4         6         8        10        12        14

COLUMN    576        696       236         72       507       320           46       100
TOTAL         1005        136        769      237        495         91        67

PERCENT    11        12         4          1         9          6         1         2
TOTAL          19          3         14         6         9          1         1

GRAND TOTAL = 5357

CHI-SQUARE (OF TABLE)          148.53521
DF*   24
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

```
CORRELATION COEFFICIENT =0.0  0
MEAN( 1)*      5.06341   STD  1)*      5.72915
MEAN( 2)*      2.13905   STD  2)*      0.68920
```

(Question 24)

I.	(1)	A once over lightly
II.	(3)	A specific answer
III.	(2)	A detailed analysis

(Question 14)

I.	(01)	Received with task assignment
II	(04)	Recalled it
III.	(09)	Searched own collection
IV.	(19)	Respondent's action
V.	(03)	Assigned subordinate to get it
VI	(05)	Asked a colleague
VII	(02)	Asked my supervisor
VIII.	(08)	Requested search of department files
IX.	(06)	Asked an internal company consultant
X	(10)	Searched company TIC
X	(7)	Requested library search
XI.	(15)	Requested data from manufacturer, vendor, or supplier
XI	(14)	Searched manufacturer, vendor, or supplier sources
XII.	(11)	Searched an outside library
XIII.	(18)	Asked an external consultant or expert
XIV.	(13)	Requested search of DOD information/data center
XIV	(12)	Searched DOD information/data center
XV.	(17)	Asked customer

Table 3-142. Desired Detail of Transporting Medium vs. Location
of First Source for Information

```
    Q25     IS CROSS TABULATED WITH    G14    OR.

VARIABLE   2 IS CROSS TABULATED WITH VARIABLE   1

NUMBER OF REPLICATIONS: 5355

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    1      3      1
    1     15      1


  ( 2)          (EXTREME RIGHT VALUE IS ROW TOTAL)
  025
    3 •   213   306   277    5C   105   258    32   116   165   236   114    31    19    33    37 1972
    T•      4     6     5     1     2     5     1     2     3     4     2     0     0     1     1    37
    R•     11    16    14     3     5    13     2     6     8    12     6     1     1     2     2   100
    C•     17    30    40    17    44    34    44    39    33    48    36    35    41    49    37    37
      •
    2 •   317   627   368    71   113   478    36   171   305   230   191    19    25    29    54 2992
    T•      6    12     7     1     2     8     1     3     6     4     4     0     0     1     1    56
    R•     11    21    12     2     4    15     1     3    1C     8     6     1     1     2     2   100
    C•     55    62    53    52    48    57    47    59    60    46    60    61    54    43    54    56
      •
    1 •    46    75    53    15    18    73     6    1C    37    29    15     1     2     5     9   392
    T•      1     1     1     0     0     1     0     C     1     1     0     0     0     0     C     7
    R•     12    19    13     4     5    19     2     3     9     7     4     0     1     1     2   100
    C•      8     7     7    11     8     9     4     3     7     6     5     3     4     7     9     7
      •
  ••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
  ( 1)       1          3          5          7          9         11        13        15
  014           2          4          6          8         10        12        14

COLUMN    576        696        236        72        507        320        46        100
TOTAL        1308        136        769        297        495        31        67

PERCENT    11         13          4         1          9          6         1          2
TOTAL         19          3         14         6          9          1         1

GRAND TOTAL= 5356

CHI-SQUARE (OF TABLE)       87.73517
DF=   28
```

```
VALUES NOT ENTERED   3
  CASE NO.    VARIABLE  2      VARIABLE  1
    1303          1              0
    4389          2              0
    5307          0              2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.C464
MEAN(  1)=      5.66169   SD(  1)=       3.73906
MEAN(  2)=      2.29427   SD(  2)=       0.59676
```

Table 3-143. Class of Information vs. Location of First Source for Information

Table 3-143. (Continued)

GRAND TOTAL = 5354

CHI-SQUARE (FF TABLE)   1C28.65(5)
DF = 169 ____

VALUES NOT ENTERED   3
   CASE NO.   VARIABLE 2   VARIABLE 1
    1503   0   0
    4306   3   0
    4427   0   10

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.5970
MEAN(1)=   5.44165   SD(1)=   3.73006
MEAN(2)=   7.00035   SD(2)=   3.31766

(Question 20)
I.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 14)
I.	(01)	Received with task assignment
II.	(04)	Recalled it
III.	(09)	Searched own collection
IV.	(19)	Respondent's action
V.	(03)	Assigned subordinate to get it
VI.	(05)	Asked a colleague
VII.	(02)	Asked my supervisor
VIII.	(08)	Requested search of department files
IX.	(06)	Asked an internal company consultant
X.	(10)	Searched company TIC
X.	(7)	Requested library search
XI.	(15)	Requested data from manufacturer, vendor, or supplier
XI.	(14)	Searched manufacturer, vendor, or supplier sources
XII.	(11)	Searched an outside library
XIII.	(16)	Asked an external consultant or expert
XIV.	(13)	Requested search of DOD information/data center
XIV.	(12)	Searched DOD information/data center
XV	(17)	Asked customer

Table 3-144. Location of First Source for Information vs. Kind of Work Position

```
914    IS CROSS TABULATED WITH     855    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5339

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2     15       1
   1     12       1
```

```
( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
8:4
  15 •        16   14    6   27   12    6   11    2    1         5  100
   T•          0    0    0    1    0    0    0    0    0         0    2
   R•         16   15    6   27   12    6   11    2    1         5  100
   C•          2    3    1    3    2    1    3    1    1         5    7
  •
  14 •     1  19    9    4    0   12    0    1    1    1    1    4   67
   T•     0    0    0    0    0    0    0    0    0    0    0    0    1
   R•     1   20   13    6   12   10    9    1    1    1    1    6  100
   C•     0    2    2    1    1    2    1    0    0    1    0    4    1
  •
  13 •     3   13    0    3    5    2    6    1         1    2    1   46
   T•     0    0    0    0    0    0    0    0         0    0    0    1
   R•     7   28   20    7   11    4   13    2         2    4    2  100
   C•     1    1    2    1    0    0    1    0         1    1    1    2
  •
  12 •     2    0    2         3         3    4    1         2    5   31
   T•     0    0    0         0         0    0    0         0    0    1
   R•     6   20    6        10        10   13    6         6   16  100
   C•     1    1    0         0         1    1    0         1    5    1
  •
  11 •     2   37   31   45   79   39   23   15   26    9   12    2  320
   T•     0    1    1    1    1    1    0    0    0    0    0    0    6
   R•     1   12   10   14   25    1    7    5    8    3    4    1  100
   C•     1    4    6    8    8    8    5    3   11    6    5    2    6
  •
  10 •    32  111   49   51   80   32   47   31   16    0   29   10  496
   T•     1    2    1    1    1    1    1    1    0    0    1    0    9
   R•     6   22   10   10   16    6    9    6    3    2    6    2  100
   C•    15   12    9   10    8    6    9    7    6    6   13   11    9
```

```
   9 •     7   55   33   39  124   50   60   42   31   29   28    9  507
   T•     0    1    1    0    2    1    1    1    1    1    1    0    9
   R•     1   11    7    8   24   10   12    8    6    6    6    2  100
   C•     3    6    6    7   12   10   12   10   13   10   13   10    9
  •
   8 •     7   41   26   30   52   39   19   34   12   13   20    4  297
   T•     0    1    0    1    1    1    0    1    0    0    0    0    6
   R•     2   14    9   10   18    8    6   11    4    4    7    1  100
   C•     3    5    5    6    5    8    4    8    3    8    9    4    6
  •
   7 •        12   11    9   17    7    5    7    3    1               72
   T•         0    0    0    0    0    0    0    0    0                1
   R•        17   15   13   24   10    7   10    4    1              100
   C•         1    2    2    2    1    1    2    1    1                1
  •
   6 •    19  134   85   82  131   83   85   68   35   23   30   12  767
   T•     0    3    2    2    2    1    2    1    1    0    1    0   14
   R•     2   17   11   11   17    8   11    9    5    3    4    2  100
   C•     9   15   16   15   13   12   17   16   15   14   13   13   14
  •
   5 •     9   46   32   21   42   31   22   17   17   10   11    3  236
   T•     0    1    0    0    1    1    0    0    0    0    0    0    4
   R•     4   17    6    9   18   13    9    7    7    4    5    1  100
   C•     4    4    3    4    4    6    4    4    7    4    5    3    4
  •
   4 •    12   31   14    9   26   10   12    8    4    4    4    2  136
   T•     0    1    0    0    0    0    0    0    0    0    0    0    3
   R•     9   23   10    7   19    7    9    6    3    3    3    1  100
   C•     5    3    3    2    1    2    2    2    2    3    2    2    3
  •
   3 •    39  146   73   74  134   60   60   49   16   11   26    3  696
   T•     1    3    1    1    3    1    1    1    0    0    0    0   13
   R•     6   21   10   11   19    9    9    7    2    2    4    1  100
   C•    18   16   14   14   13   12   12   11    7    7   12    9   13
  •
   2 •    71   10  100   96  154  104   87   85   40   28   36   12 1000
   T•     1    3    2    2    3    2    2    2    1    1    1    0   19
   R•     7   19   10   10   15   10    9    8    5    3    4    1  100
   C•    32   21   19   18   15   20   17   20   20   18   16   13   19
```

Table 3-144. (Continued)

```
1 :    15   50   47   63  120   95   64   50   30   19   22   16  576
1 •     0    1    1    1    2    1    1    1    1    0    0    0   11

R•      3   10    6   11   22   10   11   10    5    3    4    3  105
C•      7    6    9   12   13   11   13   13   13   -7   10   17   11
```

```
( 1)     1        3        5        7        9       11
d55           2        4        6        8       1C       12

COLUMN   219      516      1011      505      240      223
TOTAL         909       532       516       431      194       93

PERCENT    4       10       19        9        4        4
TOTAL          17       10       10        8        3        2
```

GRAND TOTAL= 5354

CHI-SQUARE (OF TABLE)   431.77455
DF= 154

VALUES NOT ENTERED   5
CASE NO.	VARIABLE 2	VARIABLE 1
1273	6	0
1203	2	0
1293	4	0
1303	0	5
4309	0	11

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0226
MEAN(1)=   5.25082   SD(1)=   2.76111
MEAN(2)=   5.66169   SD(2)=   3.73006

(Question 10)
I.	(01)	Received with task assignment
II.	(04)	Recalled it
III.	(09)	Searched own collection
IV.	(19)	Respondent's action
V.	(03)	Assigned subordinate to get it
VI.	(05)	Asked a colleague
VII.	(02)	Asked my supervisor
VIII.	(08)	Requested search of department files
IX.	(06)	Asked an internal company consultant
X.	(10)	Searched company TIC
XI.	(7)	Requested library search
XII.	(15)	Requested data from manufacturer, vendor, or supplier
XI.	(14)	Searched manufacturer, vendor, or supplier sources
XII.	(11)	Searched an outside library
XIII.	(16)	Asked an external consultant or expert
XIV.	(13)	Requested search of DOD information/data center
XIV.	(12)	Searched DOD information data center
XV.	(17)	Asked customer

(Question 55)
I	(02)	Research - basic
II.	(01)	Research - applied
III.	(11)	System analysis
IV.	(03)	Development - advanced
V.	(04)	Development - engineering
VI.	(05)	Development - operational system
VII.	(06)	R&D support
VIII.	(07)	Test or evaluation
IX.	(08)	Production processes
X.	(09)	Production end-items
XI.	(10)	Reliability or quality control
XII.	(12)	Customer relations

Table 3-145. Location of First Source for Information vs. Field
of Work Position

```
     G14    IS CROSS TABULATED WITH      Q56      OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2      15       1
     1       9       1
```

```
( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q14
  15 •    6     1     8    25    28     8    10    14          1CO
   T•     0     0     0     0     1     0     0     0            2
   R•     6     1     8    25    28     8    10    14          1CO
   C•     1     1     3     2     2     1     1     3            2
     •
  14 •    7     1     8     8    23     7     7     3     1     65
   T•     0     0     0     0     0     0     0     0     0      1
   R•    11     2    12    12    35    11    11     5     2    1CO
   C•     2     1     3     1     2     1     1     1     1      1
     •
  13 •    6     2           3     9    11     6     8     1     46
   T•     0     0           0     0     0     0     0     0      1
   R•    13     4           7    20    24    13    17     2    1CO
   C      1     2           0     1     2     1     2     1      1
     •
  12 •    5     4     2     8     1     5     4     2           31
   T•     0     0     0     0     0     0     0     0            1
   R•    16    13     6    26     3    16    13     6          1CO
   C•     1     4     1     1     0     1     1     0            1
     •
  11 •   32     2    14    79   105    30    38    17     2    319
   T•     1     0     0     1     2     1     1     0     0      6
   R•    10     1     4    25    33     9    12     5     1    1CO
   C•     6     2     5     7     7     5     6     4     2      6
     •
  10 •   44     9    22    95   121    93    64    30    16    454
   T•     1     0     0     2     2     2     1     1     0      9
   R•     9     2     4    19    24    19    13     6     3    1CO
   C•     8     9     7     8     8    17     9     7    13     9
```

```
     •
   9 •   71          26   154   106    44    65    23     8    5C7
   T•     1           0     3     2     1     1     1     0      9
   R•    14           5    30    21     9    13     7     2    1CO
   C•    13           9    13     7     8    10     8     8      9
     •
   8 •   28     3    12    91    81    25    44    22     1    297
   T•     1     0     0     2     2     0     1     0     0      6
   R•     9     1     4    31    27     8    15     4     0    1CO
   C•     5     3     4     8     6     5     6     3     1      6
     •
   7 •    6     2     2    20    23     8     9           2     72
   T•     0     0     0     0     0     0     0           0      1
   R•     8     3     3    28    32    11    13           3    1CO
   C•     1     2     1     2     2     1     1           2      1
     •
   6 •   68    14    51   182   210    52    96    74    22    749
   T•     1     0     1     3     4     1     2     1     0     14
   R•     9     2     7    24    27     7    12    10     3    1CO
   C•    12    14    17    15    15     9    14    18    22     14
     •
   5 •   41     5    11    47    68    28    26     9     1    236
   T•     1     0     0     1     1     1     0     0     0      4
   R•    17     2     5    20    29    12    11     4     0    1CO
   C•     7     5     4     4     5     5     4     2     1      4
     •
   4 •   16     5    17    16    37    19    17     9          136
   T•     0     0     0     0     1     0     0     0            3
   R•    12     4    13    12    27    14    13     7          1CO
   C•     3     5     6     1     3     3     3     2            3
     •
   3 •   60    18    53   148   166    66   107    58    14    695
   T•     1     0     1     3     3     1     2     1     0     13
   R•     9     3     8    21    24     9    15     8     2    1CO
   C•    11    18    19    12    11    12    16    14    14     13
     •
   2 •  115    28    39   204   280   104   134    81    20   1005
   T•     2     1     1     4     5     2     3     2     0     19
   R•    11     3     4    20    28    10    13     8     2    1CO
   C•    21    28    13    17    19    19    20    20    20     19
```

Table 3-145.   (Continued)

```
 1 •     5?    6     30   126   107    95    50    54    12   572
 To      1     0     t     2     3     1     1     1     0    11
 de      5     1     5    22    33    10     9     9     2   100
 C•      9     6    10    10    13    10     7    13    12    11

 •••••••••••••••••••••••••••••••••••••••••••••••••••••
 ( 1)    1     _     3           5           7           4
 056           2           4           6           8

 COLUMN  557        300        1445        677        100
 TOTAL         100        1206        555        404

 PERCENT  10         6          27         13          2
 TOTAL          2          23         10          8

 GRAND TOTAL=  5344

 CHI-SQUARE (OF TABLE)      330.54556
 DF=  112
```

VALUES NOT ENTERED 15

CASE NO.	VARIABLE 2	VARIABLE 1
370	3	0
439	2	0
444	1	0
449	1	0
465	14	0
472	2	0
479	14	0
710	2	0
727	1	0
736	2	0
745	1	0
1303	0	7
1957	11	0
1964	10	0
4389	0	5

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
CORRELATION COEFFICIENT -0.0067
MEAN( 1)=     4.83654   SD( 1)=      1.97515
MEAN( 2)=     5.66169   SD( 2)=      3.73006
```

(Question 14)
I.   (01) Received with task assignment
II.   (04) Recalled it
III.   (00) Searched own collection
IV.   (19) Respondent's action
V.   (03) Assigned subordinate to get it
VI.   (06) Asked a colleague
VII.   (02) Asked my supervisor
VIII. (08) Requested search of department files
IX.   (06) Asked an internal company consultant
X.   (16) Searched company TIC
X.   (7)   Requested library search
XI.   (15) Requested data from manufacturer, vendor, or supplier
XI.   (14) Searched manufacturer, vendor, or supplier sources
XII.   (11) Searched an outside library
XIII. (18) Asked an external consultant or expert
XIV.   (13) Requested search of DOD information/data center
XIV.   (12) Searched DOD information/data center
XV.   (17) Asked customer

(Question 56)
I.   Production, Management and Social Sciences
       (32) Miscellaneous arts and sciences
       (23) Personnel and training
       (26) Production and management
       (28) Psychology and human engineering
II.   Medical Sciences
       (16) Medical sciences
III.   Mechanical, Industrial, Civil and Marine Engineering
       (11) Ground transportation equipment
       (13) Installations and constructions
       (18) Military sciences and operations
       (24) Photography and other reproduction processes
       (29) Quartermaster equipment and supplies
       (31) Ships and marine equipment
       (33) Transportation
IV.   Aeronautics and Space Technology
       (01) Aircraft and flight equipment
       (12) Guided missiles
       (19) Navigation
V.   Electronics and Electrical Engineering
       (05) Communications
       (06) Detection
       (07) Electrical equipment
       (08) Electronics, electronic equipment
VI.   Chemical Science and Materials
       (03) Chemical warfare equipment and materials
       (04) Chemistry
       (10) Fuels and combustion
       (14) Materials (nonmetallic)
       (17) Metallurgy
       (22) Ordnance

VII.   Physical Science
       (02) Astronomy, geophysics and geography
       (09) Fluid mechanics
       (20) Nuclear physics and nuclear chemistry
       (21) Nuclear propulsion
       (25) Physics
       (27) Propulsion systems
VIII. Research and Research Equipment
       (30) Research and research equipment
IX.   Mathematics
       (15) Mathematics

Table 3-146. Acquisition From First Source vs. Why First Source Used

```
Q17     IS CROSS TABULATED WITH     Q15     OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5350

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2       5       1
    1       6       1
```

(2) Q17			EXTREME RIGHT VALUE IS A-H TOTAL					
5 •	355	524	144	560	278	422	2511	
T•	7	10	5	11	5	12	47	
R•	14	21	6	23	11	21	100	
C•	41	37	40	49	55	49	47	
4 •	215	791	161	539	204	661	251	
T•	4	15	3	10	4	11	47	
R•	5	32	6	21	8	24	100	
C•	37	55	44	45	40	47	47	
3 •	6	74	40	52	14	43	234	
T•	0	1	1	1	0	1	4	
R•	3	32	17	22	5	18	100	
C•	1	5	11	4	4	3	4	
2 •		25	17	11	4	4	57	
T•		0	0	0	0	0	1	
R•		44	21	21	7	7	100	
C•		2	5	1	1	0	1	
1 •	4	8	7	11	3	4	37	
T•	0	0	0	0	0	0	1	
R•	11	22	19	30	8	11	100	
C•	1	1	2	1	1	0	1	

```
•••••••••••••••••••••••••••••••••••••••••••
( 1)    1           3           5
Q15
                 2           4           6
```

(Question 17)
I.   (4)   Irrelevant or inappropriate information
II. (5)   Nothing
III. (3)   Reference to another source
IV. (2)   Part of the information
V.   (1)   All the information needed

(Question 15)
I.   (1)   Received with task assignment
II.   (4)   Available, ready, or easy to use
III. (6)   Found helpful previously
IV.   (3)   Most authoritative
V.   (2)   Only source known
VI.   (5)   Recalled, or was told, that specific chunk was available from the source

```
COLUMN   560         305         503
TOTAL         1426         1194         1274

PERCENT   10           6          9
TOTAL         26           22          23

GRAND TOTAL= 5350

CHI-SQUARE  (C  TABLE)        211.42312
DF=   23

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   = 0401
MEAN( 1)=        3.5441    SD( 1)=     1.74128
MEAN( 2)=        4.30355   SD( 2)=     0.64024
```

Table 3-147. Desired Class of Information vs. Acquisition From First Source

```
      Q16    IS CROSS TABULATED WITH       Q17      QR;

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 4233

VARIABLE MAXIMUM MINIMUM   AS SPECIFIED)
     2     17      1
     1      5      1
```

(2) Q16	(EXTREME PT.M) VALUE IS ROW TOTAL)				
14 •	2	3	13	16	203	427
T•	0	u	0	5	5	10
R•	0	1	3	48	48	100
C•	•	•	•	10	11	10
13 •	3		7	64	93	187
T•	c		0	2	2	4
R•	2		4	45	50	100
C•	12			4	5	4
12 •	•	5	52	316	147	524
T•	0	0	1	7	3	12
R•	1	1	10	60	28	100
C•	15	11	25	15	8	12
11 •		1	3	55	47	106
T•	u	0	1	1	1	3
R•		1	3	52	44	100
C•		2	1	3	2	3
10 •	8	16	42	589	569	1224
T•	0	0	1	14	13	29
R•	1	1	3	48	46	100
C•	31	34	20	29	30	29
9 •	3	2	14	212	258	489
T•	0	0	0	5	6	12
R•	1	0	3	43	53	100
C•	12	4	7	10	14	12
8 •			5	89	92	186
T•			0	2	2	4
R•			3	48	49	100
C•			2	4	5	4
7 •	1	2	2	74	80	159
T•	0	0	0	2	2	4
R•	1	1	1	47	50	100
C•	4	4	1	4	4	4
6 •				20	16	36
T•				0	0	1
R•				56	44	100
C•				1	1	1
5 •		5	15	209	219	449
T•		0	0	5	5	11
R•		1	4	47	49	100
C•		11	8	10	12	11
4 •	1	3	12	70	79	165
T•	0	0	0	2	2	4
R•	1	2	7	42	48	100
C•	4	6	6	3	4	4
3 •		1		19	35	55
T•		0		0	1	1
R•		2		35	64	100
C•		2		1	2	1
2 •	1	1	2	26	17	47
T•	0	0	0	1	0	1
R•	2	2	4	55	56	100
C•	4	2	1	1	1	1
1 •	3	8	34	81	49	179
T•	0	0	2	2	1	4
R•	2	4	21	45	27	100
C•	12	17	18	4	3	4

```
   •••••••••••••••••••••••••••••••••••••
( 1)       1           3         5
Q17             2           4

COLUMN    26       206       1904
TOTAL        47       2050

PERCENT    0        4        44
TOTAL        1         48
```

(Question 16)
I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulas; computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(b)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 17)
I.	(4)	Irrelevant or inappropriate information
II.	(5)	Nothing
III.	(3)	Reference to another source
IV.	(2)	Part of the information
V.	(1)	All the information needed

```
GRAND TOTAL=  4233

CHI-SQUARE (OF TABLE)         281.50871
DF=   52

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0279
MEAN(  1)=      4.36050    SD(  1)=      0.68433
MEAN(  2)=      9.13395    SD(  2)=      3.37304
```

Table 3-148. Actual Volume of Transporting Medium vs. Desired Class of Information

```
-021   IS CROSS TABULATED WITH      -GiV    OF.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (IS SPECIFIED)
    2      5       1
    1      14      1
```

```
( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
-021
  4 •   68   15   19   37  177   13   35   54  146  350   44  140   63  150 1277
   T•    2    0    0    1    1    0    1    1    3    8    1    4    1    4   30
   R•    5    1    1    3   10    1    3    4   11   20    3   17    5   12  100
   C•   38   32   39   23   29   36   77   29   30   29   42   28   14   35   30

  3 •   90   25   17   47  165   14   62   47  137  491   36  290   60  143 1662
   T•    2    1    0    2    4    0    1    2    3   12    1    7    1    3   39
   R•    5    2    1    4   10    1    4    4    8   30    2   17    4    9  150
   C•   50   53   31   41   36   39   79   36   28   30   34   55   22   34   39

  2 •   20    6   17   44  126    6   39   42  182  358   20   75   37  183 1035
   T•    0    0    0    1    3    0    0    1    4    8    0    2    1    2   75
   R•    2    1    2    4   12    1    4    4   18   31    2    7    4   10  190
   C•   11   13   31   27   28   17   25   23   37   26   19   14   23   24   75

  1 •    1    1    2   16   32    3   22   23   25   51    6   10   27   29  2.3
   T•    0    0    0    0    1    0    1    1    1    1    0    0    1    1
   R•    0    0    1    6   23    1    0    9   10   21    7    4   11   12  100
   C•    1    2    4   10    7    8   14   12    5    4    6    2   14    7    6
```

```
( 1)    1        3        5        7        9       11       13
-01v         2        4        6        8       10       12       14

COLUMN  179      55      448      158      490      106      187
TOTAL       47      164       36      186     1718      523      425

PERCENT  4        1       11        4       12        3        4
TOTAL       1        4        1        4       29       12       10
```

```
GRAND TOTAL= 4222

CHI-SQUARE (OF TABLE)      259.31431
DF=  39

VALUES NOT ENTERED1137

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0699
MEAN( 1)=      7.21739   SD( 1)=       4.77774
MEAN( 2)=      2.89233   SD( 2)=       0.93612
```

(Question 21)

I.	(4)	All from recall
II.	(1)	One report of document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All reports and documents that could be found pertinent to the question

(Question 16)

I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulas; computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

Table 3-149. Desired Volume of Transporting Medium vs. Desired Class of Information

```
   G22    IS CROSS TABULATED WITH    Q16    OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 4233

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      4       1
    1      14      1
```

```
  (2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q22
   4 •   103   20   21   53  175   18   44   74  195  504   59  243   74  106 1709
    T•     2    0    0    1    4    0    1    2    5   12    1    6    2    4   42
    R•     6    1    1    3   10    1    3    4   11   28    3   15    4   10  160
    C•    50   43   30   32   39   50   29   40   40   41   47   51   41   44   42
    •
   3 •    43   18   14   45   98   10   47   36   65  266   23  145   42   85  927
    T•     1    0    0    1    2    0    1    1    2    6    1    3    1    2   22
    R•     5    2    2    5    9    1    5    4    7   29    2   16    5    9  100
    C•    24   36   25   27   20   20   30   19   13   22   22   28   22   20   22
    •
   2 •    32    7   18   52  144    5   42   56  205  403   26   99   43  126 1248
    T•     1    0    0    1    4    0    1    1    5   10    1    2    1    3   30
    R•     3    1    1    4   12    0    3    4   16   32    2    4    3   10  100
    C•    15   15   33   32   34   14   26   30   42   33   25   19   23   30   30
    •
   1 •     1    2    2   15   32    3   24   20   24   51    7   12   26   30  249
    T•     0    0    0    0    1    0    1    0    1    1    0    0    1    1    6
    R•     0    1    1    6   13    1   10    8   10   20    3    5   10   12  100
    C•     1    4    4    9    7    8   15   11    5    4    7    2   14    7    6
    •
  •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
  (1)     1         3         5         7         9        11        13
Q16           2         4         6         8        10        12        14

COLUMN  175        55        449       159       489       106       187
TOTAL         47        165        36        186       1224       524       427

PERCENT   4         1         10         3         11         2         4
TOTAL          1         3         0         4         29        12        10
```

```
GRAND TOTAL= 4233

CHI-SQUARE (OF TABLE)        230.55614
DF=  39

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0123
MEAN ( 1)=     5.13395    SD( 1)=      3.37304
MEAN ( 2)=     3.00545    SD( 2)=      0.97851
```

Table 3-150. Usefulness of Title Listings or Abstracts vs. Desired Class of Information

```
    23   IS CROSS TABULATED WITH      16   OP.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 9350

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
      2       3       1
      1      14       1


( 2)          (EXTREME RIGHT VALUE IS ROW TOTAL)
  2:
    3 •    72    23     9    42    89    13    31    63    92   266    23   229    38    52 1022
    2•      3     1     0     1     2     0     3     1     2     6     1     5     1     1    24
    1•      7     2     1     4     9     1     3     4     9    26     2    22     4     5   100
    C•     40    49    16    25    20    36    19    23    19    72    22    44    20    12    24
    •
    2 •    43    15     7    43    68    17    36    23    76   270    15   120    32    80   840
    2•      3     0     0     1     2     0     1     1     2     5     0     3     1     2    70
    1•      5     2     1     5     8     1     4     3     9    32     2    14     4    10   100
    C•     24    32    13    26    15    33    23    12    16    22    14    23    17    19    70
    •
    1 •    66     9    39    80   291    11    92   120   322   689    68   175   117   295 2377
    2•      2     0     1     2     7     0     2     3     8    16     2     4     3     7    56
    1•      3     0     7     3    12     0     4     5    16    29     3     7     5    12   100
    C•     36    19    71    49    65    31    58    65    66    55    64    33    63    69    56
    •
    •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
  ( 1)    1           3           5           7           9          11          13
   16            2           4           6           8          10          12          14

COLUMN   170          55          448         139          490         106         187
 TOTAL          47          145          36          186         1275         524         427

PERCENT    4           1           11           4           12           3           4
 TOTAL           1           4           1           4           29          12          10

GRAND TOTAL =  4736

CHI-SQUARE (OF TABLE)     308.02263
 DF =  26
```

```
VALUES NOT ENTERED=1125

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0144
MEAN( 1)=      7.21739    SD( 1)=      4.77774
MEAN( 2)=      1.66057    SD( 2)=      0.83028
```

Table 3-151. Actual Detail of Transporting Medium vs. Desired Class of Information

```
    C24    IS CROSS TABULATED WITH      Q16    00.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359    ..

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
        2     3     1
        1    14     1

( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q24
     3 +   48   22   22   64  137   20   51   71  153  379   39  207   45  117 1379
     T+    1    1    1    2    3    0    1    2    4    9    1    5    1    9   33
     R+    3    2    2    5   10    1    4    5   11   27    3   15    4    0  100
     C+   27   47   40   39   31   56   32   30   31   31   37   40   26   27   33
     +
     2 +   81   18   27   82  244   13   77   79  253  634   52  108  102  231 2601
     T+    2    0    1    2    6    0    2    2    0   15    1    3    4    5   49
     R+    4    1    1    4   12    1    4    4   12   30    2    9    5   11  100
     C+   45   30   49   50   54   36   48   42   52   52   49   36   55   54   49
     +
     1 +   50    7    6   19   67    3   31   36   64  212   15  129   34   79  774
     T+    1    0    0    0    2    0    1    1    2    5    0    3    1    2    0
     R+    6    1    1    2    9    0    4    5   11   27    2   17    5   10  100
     C+   28   15   11   12   15    8   19   19   17   17   14   25   15   19   18
     +
    ........................................................................................
( 1)     1         3         5         7         9        11        13
Q16           2         4         6         0        10        12        14

COLUMN  179        55        448       159       498       106       187
TOTAL     .  97      16         36       106       1225      524       427

PERCENT   4         1         11        4         12        3         4
TOTAL     1         4         1         4         29        12        10

GRAND TOTAL= 4234

CHI-SQUARE (OF TABLE)      96.46027
DF=   26
```

```
VALUES NOT ENTERED 1125

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0032
MEAN( 1)=      7.21739   SD( 1)=      4.77774
MEAN( 2)=      2.13902   SD( 2)=      0.68925
```

Table 3-152. Desired Detail of Transporting Medium vs. Desired Class of Information

```
    025    IS CROSS TABULATED WITH    016    UR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 4233

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2      3      1
    1     14      1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
025
    3 •   48    -5    21    65   106    19    56    79   106   440    42   256    59   137 1615
      1•    2     1     0     2     4     0     1     2     4    10     1     4     1     3    38
     R•     4     2     1     4    10     1     3     5    11    27     3    16     4     9   140
     C•    38    53    38    39    37    53    36    42    38    36    40    42    32    32    36
      •
    2 •    56    20    31    92   256    15    92    92   273   708    59   217    12   252 2315
      1•    2     0     1     2     6     0     2     2     6    17     1     5     3     6    25
     R•     4     1     1     4    11     1     6     4    12    31     3     9     5    11   100
     C•    56    43    56    56    57    42    56    49    56    58    56    52    60    59    55
      •
    1 •    15     2     1     8    27     2    13    15    32    70     5    56    16    30   303
      1•    0     0     0     0     1     0     0     0     1     2     0     1     0     1     7
     R•     5     1     1     3     4     1     4     5    11    25     2    17     5    13   100
     C•     4     4     5     5     4     4     2     8     7     6     5    10     9     9     7
      •
    •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)     1           3           5           7           9          11          13
016            2           4           6           8          10          12          14

COLUMN   179         55         443         159         409        1224         87
 TOTAL          47         105          36         186                524         427

PERCENT    4           1          10           3          11           2           4
 TOTAL           1           3           0           4          28          12          10

GRAND TOTAL= 4233

CHI-SQUARE (CF TABLE)      69.7.
DF=  26

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE.)

CORRELATION COEFFICIENT -0.0219
MEAN  1 =  .13395   SD( 1)=    3.37306
MEAN  2 =  2.50995   SD( 2)=    0.59760
```

I.   (1) A once over lightly
II. (3) A specified answer
III. (2) A detailed analysis

(Question 16)
I.   (15) Sequential information source
II.   (1) Concepts
III. (8) Raw data
IV.   (3) Math aids and formulae; computer programs
V.   (3) Experimental processes and procedures
VII. (11) Test processes and procedures
VIII. (13) Evaluation
IX.   (9) Specifications
X.   (6) Performance and characteristics
XI.   (7) Production processes and procedures
XII. (10) Technical status
XIII. (12) Utilization
XIV. (2) Cost and funding, administrative action

Table 3-153. Actual Layout of Transporting Medium vs. Desired Class of Information

Q26   IS CROSS TABULATED WITH   Q15   Q9.

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 4177

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
  2   17   1
  1   14   1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q26

17 •	1		1							•			4	2	14
T•	0		0							•			0	0	0
R•	7		7							43			29	14	100
C•	1		2							1			2	0	0
16 •										2					3
T•										0					0
R•										100					100
C•										0					0
15 •				1						1					2
T•				0						0					0
R•				50						50					100
C•				0						0					0
14 •	11	1	3	12	42	2	15	17	35	184	13	36	24	46	361
T•	0	0	0	0	1	0	0	0	2	2	0	1	1	1	9
R•	3	0	1	3	12	1	4	5	10	29	4	10	7	13	100
C•	6	2	6	7	9	5	10	9	7	9	15	7	13	11	9
13 •	1	1	2	10	15	5	16	6	16	48	7	23	6	16	164
T•	0	0	0	0	0	0	0	0	0	3	0	1	0	0	4
R•	1	1	2	6	5	3	6	4	10	29	4	14	2	10	100
C•	1	2	4	6	3	14	6	2	3	4	7	4	2	4	4
12 •	25	3	7	4	35	2	24	25	51	100	8	60	13	46	421
T•	0	0	0	0	1	0	1	1	1	3	0	1	0	1	10
R•	4	1	2	2	9	0	5	6	13	26	2	15	3	11	100
C•	8	5	13	2	9	6	14	14	16	9	8	12	7	11	10
11 •	64	22	13	52	199	7	29	33	142	334	18	192	30	67	1111
T•	2	1	0	1	5	0	1	1	3	8	0	5	1	2	27
R•	6	2	1	5	18	1	3	3	13	30	2	17	3	6	100
C•	36	47	24	32	24	19	19	18	29	28	17	37	16	16	27
10 •	3	1	1		1	1		2	1	12	3	6	2	7	40
T•	0	0	0		0	0		0	0	0	0	0	0	0	1
R•	8	3	3		3	3		5	3	30	3	15	5	18	100
C•	2	2	2		0	3		1	0	1	3	1	1	2	1
9 •	7		3	1	14		6	2	13	46	3	5	3	12	115
T•	0		0	0	0		0	0	0	1	0	0	0	0	3
R•	6		3	1	12		5	2	11	40	3	3	3	10	100
C•	4		6	1	3		4	1	3	4	3	1	2	3	3
8 •				1	3		1	3	7	12	6	8		9	50
T•				0	0		0	0	0	0	0	0		0	1
R•				2	6		2	6	14	24	12	16		18	100
C•				1	1		1	2	2	1	6	2		2	1
7 •	31	10	4	32	35	6	23	17	100	102	16	90	22	55	546
T•	1	0	0	1	1	0	1	0	2	2	0	2	1	1	13
R•	6	2	1	6	6	1	4	3	18	19	3	16	4	11	100
C•	17	21	7	20	8	17	15	9	20	9	16	17	12	14	13
6 •	14	1	11	16	21	4	10	18	24	125	5	18	11	53	331
T•	0	0	0	0	1	0	0	0	1	3	0	0	0	1	8
R•	4	0	3	5	6	1	3	5	7	38	2	5	3	16	100
C•	5	2	20	10	5	11	6	10	5	10	5	3	6	13	9
5 •	14	3	7	3	45		5	13	28	124	4	19	13	78	345
T•	0	0	0	0	2		0	0	1	3	0	0	0	1	8
R•	5	1	2	1	24		1	4	8	36	1	5	4	6	100
C•	7	6	13	2	19		3	7	6	10	4	4	7	7	6
4 •					1					1		3	1		6
T•					0					0		0	0		0
R•					17					17		50	17		100
C•					0					0		1	1		0

Table 3-153. (Continued)

```
 3       3    1          2   16    2    4    9   25   37    3   14   12   20  148
 T•      0    0          0    0    0    0    0    1    1    0    0    0    C    4
 R•      2    1          1   11    1    3    6   17   25    2    9    8   14  100
 C•      2    2          1    4    6    3    5    5    3    3    3    6    5    4
 •
 2 •    10               7         2    2   11   33    4   10    5   15   99
 T•      C               0         0    0    0    1    0    0    0    0    2
 R•     10               7         2    2   11   33    4   10    5   15  100
 C       6               2         1    1    2    3    4    2    3    4    2
 •
 1 •     3    4    2    23   62    7   29   33   35  106   13   35   42   44  438
 T•      0    0    0     1    1    0    1    1    1    3    0    1    1    1   10
 R•      1    1    0     5   14    2    7    8    8   24    3    8   10   10  100
 C•      2    9    4    14   14   19   19   18    7    9   13    7   23   10   10
 •
 ••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
 ( 1)    1         3         5         7         9        11        13
 Q16           2         4         6         8        10        12        14

COLUMN  179       54       447      155       488       103       186
 TOTAL       47       162       36       180      1200       518       423

PERCENT   4         1        10         3        11         2         4
 TOTAL        1         3         0         4        28        12        10

GRAND TOTAL= 4177

CHI-SQUARE (OF TABLE)     632.10031
DF= 208

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.0038
MEAN( 1)=       5.13000     SD( 1)=       3.38177
MEAN( 2)=       8.38445     SD( 2)=       4.04762
```

(Question 26)		
I	(14)	Recall
II.	(17)	Telephone conversation
III	(11)	Group discussion
IV	(4)	Photographs
V	(3)	Graphics (diagrams, drawings, etc)
VI.	(2)	Tables or lists
VII	(1)	Narrative text
VIII	(16)	Narrative text and tables or lists
IX.	(9)	Graphics and lists
X.	(8)	Photographs and text
XI	(7)	Graphics and text
XII.	(16)	Graphics, text and oral
XIII	(17)	Graphics, text, oral, and recall
XIV	(12)	Informal briefing, with chalk or pencil drawings
XV	(5)	Microfilm - microfiche
XVI	(6)	Slides or motion pictures
XVII	(10)	Formal briefing or lecture

(Question 16)		
I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(19)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

Table 3-154. Desired Layout of Transporting Medium vs. Desired
Class of Information

Q27   IS CROSS TABULATEL WITH   Q16   OR,

VAP'.BLE   2 IS CROSS TABULATEU WITH VARIABLE 1

NUMBER OF REPLICATIONS= 4213

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2   17   1
   1   14   1

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q27

17 •	3		1					1	1	5	1	3	5	4	28
T•	0		0					0	0	0	0	0	0	0	1
R•	11		4					4	4	32	4	11	18	14	100
C•	2		2					1	0	1	1	1	3	1	1
•															
16 •	1							2		5					8
T•	0							0		0					0
R•	13							25		63					100
C•	1							1		0					0
•															
15 •	1				1			2		2	1				7
T•	0				0			0		0	0				0
R•	14				14			29		29	14				100
C•	1				0			1		0	1				0
•															
14 •	5	1	1	12	29	2	12	17	20	68	11	34	22	29	263
T•	0	0	0	0	1	0	0	0	0	2	0	1	1	1	6
R•	2	0	0	5	11	1	5	6	8	26	4	13	8	11	100
C•	3	2	2	7	6	6	8	9	4	6	10	7	12	7	6
•															
13 •		1	2	5	10	4	8	7	7	35	5	12	1	8	106
T•		0	0	0	0	0	0	0	0	1	0	0	0	0	3
R•		1	2	5	9	4	8	7	8	33	5	11	1	8	100
C•		2	4	3	2	11	5	4	2	3	5	2	1	2	3
•															
12 •	12	2	5	11	37	2	18	19	38	77	6	57	12	41	337
T•	0	0	0	0	1	0	0	0	1	2	0	1	0	1	8
R•	4	1	1	3	11	1	5	6	11	23	2	17	4	12	1.
C•	7	4	9	7	0	6	11	10	8	6	6	11	6	10	8
•															
11 •	68	23	15	56	125	9	40	38	162	404	23	215	42	87	1306
T•	2	1	0	1	3	0	1	1	4	10	1	5	1	2	31
R•	5	2	1	4	10	1	3	3	12	31	2	16	3	7	100
C•	38	49	27	34	28	22	25	21	33	33	22	41	22	21	31
•															
10 •	5	1	1		4	1		2	2	17	3	7	3	8	54
T•	0	0	0		0	0		0	0	0	0	0	0	0	1
R•	9	2	2		7	2		4	4	31	6	13	6	15	100
C•	3	2	2		1	3		1	0	1	3	1	2	2	1
•															
9 •	5		3	3	15		3	5	15	47	4	7	3	14	124
T•	0		0	0	0		0	0	0	1	0	0	0	0	3
R•	4		2	2	12		2	4	12	38	3	6	2	11	100
C•	3		5	2	3		2	3	3	4	4	1	2	3	3
•															
8 •				1	3		1	3	9	12	5	8		9	51
T•				0	0		0	0	0	0	0	0		0	1
R•				2	6		2	6	18	24	10	16		18	100
C•				1	1		1	2	2	1	5	2		2	1
•															
7 •	28	9	6	31	35	7	23	16	113	110	17	88	24	66	573
T•	1	0	0	1	1	0	1	0	3	3	0	2	1	2	14
R•	5	2	1	5	6	1	4	3	20	19	3	15	4	12	100
C•	16	19	11	19	8	19	15	9	23	9	16	17	13	16	14
•															
6 •	15	1	12	17	23	1	12	18	28	141	5	22	8	64	370
T•	0	0	0	0	1	0	0	0	1	3	0	1	0	2	9
R•	4	0	3	5	6	0	3	5	8	38	2	6	2	17	100
C•	8	2	22	10	5	3	8	10	6	12	8	4	4	15	9
•															
5 •	20	3	7	4	87	1	6	12	38	145	4	22	15	28	392
T•	0	0	0	0	2	0	0	0	1	3	0	1	0	1	9
R•	5	1	2	1	22	0	2	3	10	37	1	6	4	7	100
C•	11	6	13	2	19	3	4	7	8	12	4	4	8	7	9
•															
4 •					1		1	1		2		3	1		9
T•					0		0	0		0		0•	0		0
R•					11		11	11		22		33	11		100
C•					0		1	1		0		1	1		0

Table 3-154. (Continued)

```
 3 •    4    1        2   14    3    3    6   17   24    2   10    9   14  109
 T•     0    0        0    0    0    0    0    0    1    0    0    0    0    3
 R•     4    1        2   13    3    3    6   16   22    2    9    8   13  100
 C•     2    2        1    3    8    2    3  _ 3    2    2    2    5    3    3
   •
 2 •    9             5         1    3    6   17    2    3    4   11   61
 T•     c             0         0    0    0    0    0    0    0    0    0    1
 R•    15             8         2    5   10   28    3    5    7   18  100
 C•     5             1         1    2    1    1    2    1    2    3    1
   •
 1 •    3    5    2   23   58    7   29   31   32  101   13   32   36   41  415
 T•     0    0    0    1    1    0    1    1    1    2    0    1    1    1   10
 R•     1    1    0    6   14    2    7    7    8   24    3    8    9   10  100
 C•     2   11    4   14   13   19   18   17    7    8   12    0   20   10   10
   •
```
•••

(1)	1		3		5		7		9		11		13	
Q16		2		4		6		8		10		12		14

COLUMN	175		55		447		157		489		105		187	
TOTAL		47		165		36		183		1216		523		424

PERCENT	4		1		10		3		11		2		4	
TOTAL		1		3		0		4		28		12		10

GRAND TOTAL = 421

CHI-SQUARE (OF TABLE)   635.39094
DF= 208

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT .0193
MEAN(1)=   3.17150   SD(1)=   3.37626
MEAN(2)=   9.16590   SD(2)=   3.86984

(Question 27)
I.   (14) Recall
II.   (13) Telephone conversation
III   (11) Group discussion
IV.   (4)   Photographs
V.   (3)   Graphics (maps, graphs, etc.)
VI   (5)   Tables or lists
VII.   (1)   Narrative text
VIII   (15) Narrative text and tables or lists
IX.   (9)   Graphics and lists
X.   (8)   Photographs and text
XI.   (7)   Graphics and text
XII   (16) Graphics, text and oral
XIII   (17) Graphics, text, oral, and recall
XIV.   (12) Information briefing, with chalk or pencil drawings
XV.   (2)   Microfilm - microfiche
XVI.   (6)   Slides or motion pictures
XVII   (10) Formal briefing or lecture

(Question 16)
I.   (15) Requested information source
II.   (1)   Concepts
III   (3)   Raw data
IV.   (5)   Math aids and formulae, computer programs
V.   (14) Designs or design techniques
VI.   (4)   Experimental processes and procedures
VII.   (11) Test processes and procedures
VIII.   (13) Evaluation
IX.   (9)   Specifications
X.   (6)   Performance and characteristics
XI.   (7)   Production processes and procedures
XII.   (10) Technical status
XIII.   (12) Utilization
XIV.   (2)   Cost and funding, administrative action

Table 3-155. Class of Information vs. Desired Class of Information

```
Q28    IS CROSS TABULATED WITH    Q16    O*.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2      14      1
   1      14      1
```

(2) Q28	(EXTREME RIGHT VALUE IS ROW TOTAL)														
14 •	4				3		2	2	3	4	3	4	4	76	110
T•	0				0		0	0	0	0	0	0	0	2	3
R•	4				3		2	2	3	8	3	4	4	6*	100
C•	2				1		1	1	1	1	3	1	7	18	3
13 •	6		2	7	18	1	12	2	14	27	4	14	19	25	146
T•	0		0	0	0	0	0	0	0	1	0	0	0	1	3
R•	4		1	1	12	1	8	1	16	18	3	10	13	17	130
C•	3		4	1	4	3	8	1	3	2	4	3	10	6	3
12 •	13	3	2	1	13	3		10	5	41	9	98	12	44	254
T•	0	0	0	0	0	0		0	0	1	0	2	0	1	6
R•	5	1	1	0	5	1		4	2	16	4	39	5	17	100
C•	7	6	4	1	3	8		5	1	3	8	19	6	10	6
11 •	5		1	1	21		6	6	10	25	46	21	3	28	173
T•	0		0	0	0		0	0	0	1	1	0	0	1	4
R•	3		1	1	12		3	3	6	14	27	12	2	16	100
C•	3		2	1	5		4	3	2	2	43	4	2	7	4
10 •	45	10	19	13	83	5	20	57	102	505	13	123	35	40	1070
T•	1	0	0	0	2	0	0	1	2	12	0	3	1	1	25
R•	4	1	2	1	8	0	2	5	10	47	1	11	3	4	100
C•	25	21	35	8	19	14	13	31	21	41	17	23	19	9	25
9 •	23		1	8	72	1	71	16	230	198	7	31	14	64	686
T•	1		0	0	2	0	0	0	5	5	0	1	0	2	16
R•	3		0	1	10	0	3	2	34	29	1	5	2	9	130
C•	13		2	5	16	3	13	9	47	16	7	6	7	15	16
8 •	6		2	6	12		2	13	8	40		22	8	22	141
T•	0		0	0	0		0	0	0	1		1	0	1	3
R•	4		1	4	9		1	9	6	28		16	6	16	100
C•	3		4	4	3		1	7	2	3		4	4	5	3
7 •	3		2	1	11	2	58	11	22	32	2	12	6	10	172
T•	0		0	0	0	0	1	0	1	1	0	0	0	0	4
R•	2		1	1	6	1	34	6	13	19	1	7	3	6	100
C•	2		4	1	2	6	36	6	4	3	2	2	3	2	4
6 •	11	1	2	5	15	12	10	8	7	74	5	39	6	10	154
T•	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4
R•	7	1	1	3	10	8	6	5	5	16	3	25	4	5	100
C•	6	2	4	3	3	33	6	4	1	2	5	7	3	2	4
5 •	19	1	2	8	132	3	4	14	45	105	9	42	23	32	439
T•	0	0	0	0	3	0	0	0	1	2	0	1	1	1	10
R•	4	0	0	2	30	1	1	3	10	24	2	10	5	7	100
C•	11	2	4	5	29	8	3	8	9	9	8	8	12	7	10
4 •	13	4	3	99	19	4	5	18	6	35		31	31	13	281
T•	0	0	0	2	0	0	0	0	0	1		1	1	0	7
R•	5	1	1	35	7	1	2	6	2	12		11	11	5	100
C•	7	9	5	60	4	1	3	10	1	3		6	17	3	7
3 •	16	1	17	5	19	1	8	14	15	123	1	31	9	32	298
T•	0	0	0	0	0	0	0	0	0	3	0	1	0	1	7
R•	5	0	6	2	6	0	3	5	5	41	2	10	3	11	100
C•	9	2	31	3	4	3	5	8	3	10	7	6	5	7	7
2 •	15	27	2	16	30	4	11	15	23	61	1	57	17	31	310
T•	0	1	0	0	1	0	0	0	1	1	0	1	0	1	7
R•	5	9	1	5	10	1	4	5	7	20	0	18	5	10	100
C•	8	57	4	10	7	11	7	8	5	5	1	11	9	7	7

(1) Q16	1	2	3	4	6	7	8	9	10	11	12	13	14
COLUMN TOTAL	179	47	55	165	448	36	159	186	490	1225	106	524	187	427
PERCENT TOTAL	4	1	1	4	11	1	4	4	12	29	3	12	4	10

Table 3-155.   (Continued)

GRAND TOTAL = 4234

CHI-SQUARE (OF TABLE)   3617.45496
DF= 156

VALUES NCT ENTERED1125

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0909
MEAN(1)=   7.21719   SD(1)=   4.77774
MEAN(2)=   7.90035   SD(2)=   3.31766

(Question 28)
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production proc see and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 16)
I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

Table 3-156. Field of Information vs. Desired Class of Information

```
   029    IS CROSS TABULATED WITH      Q16     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2      9       1
   1      14      1
```

(2) 029	(EXTREME RIGHT VALUE IS ROW TOTAL)													
9 • T• R• C•	7 0 6 4	4 0 3 9	3 0 2 5	45 1 36 27	5 0 4 1	4 0 5 17	3 0 2 2	12 0 10 4	3 0 2 1	9 0 7 1		12 0 10 2	13 0 10 7	2 0 2 0	124 3 100 3
8 • T• R• C•	9 0 3 5	3 0 1 6	7 0 2 13	46 1 14 28	22 1 7 5	8 0 7 22	17 1 5 11	15 0 5 5	24 1 7 5	81 2 24 7	3 0 1 3	38 1 11 7	31 1 9 17	33 1 10 8	332 8 100 8
7 • T• R• C•	23 1 4 13	18 0 3 38	13 0 2 24	35 1 6 21	52 1 10 14	4 0 1 11	24 1 4 16	25 1 4 13	44 1 7 9	220 5 36 18	8 0 1 8	101 2 16 19	22 1 4 12	14 0 2 3	615 15 100 15
6 • T• R• C•	36 1 6 20	5 0 1 6	6 0 1 11	4 0 1 2	35 1 6 8	6 0 1 17	16 0 3 10	28 1 5 15	44 1 8 9	223 5 39 18	29 1 5 27	100 2 17 19	10 0 2 5	33 1 6 11	573 14 100 14
5 • T• R• C•	38 1 4 21	8 0 1 17	12 0 1 22	15 0 1 9	143 3 14 32	4 0 0 11	50 1 5 31	48 1 5 26	153 4 15 31	306 7 30 25	16 0 2 15	105 2 10 20	42 1 4 23	82 2 8 19	1022 24 100 24
4 • T• R• C•	30 1 4 17	5 0 1 11	6 0 1 11	15 2 2 9	103 2 14 23	1 0 0 3	28 1 4 18	24 1 3 13	112 3 15 23	235 6 32 19	4 0 1 4	69 2 10 13	27 1 4 15	65 2 9 15	724 17 100 17
3 • T• R• C•	16 0 5 9	1 0 0 2	4 0 1 7	1 0 0 1	40 1 14 9	3 0 1 8	5 0 2 3	16 0 5 5	54 1 19 11	56 1 19 5	5 0 2 5	20 0 7 4	13 0 4 7	57 1 20 13	291 7 100 7
2 • T• R• C•	7 0 9 4			1 0 1 1	7 0 9 2	2 0 3 6	1 0 1 1	6 0 8 3	7 0 9 1	18 0 24 1		13 0 17 2	9 0 12 5	5 0 7 1	76 2 100 2
1 • T• R• C•	11 0 2 6	5 0 1 11	4 0 1 7	3 0 1 2	31 1 7 7	2 0 0 6	13 0 3 8	17 0 4 9	49 1 11 10	62 1 14 5	41 1 9 39	63 1 14 12	19 0 3 10	136 3 30 32	456 11 100 11

```
( 1)    1          3          5          7          9         11         13
016          2          4          6          8         10         12         14

COLUMN   177        55         448        159        490        106        186
 TOTAL        47         165        36         186        1210       521        427

PERCENT   .          1          11         .          12         .          4
 TOTAL        1          4          1          4          29         12         10

GRAND TOTAL = 42.3

CHI-SQUARE (OF TABLE)    1297.95439
DF= 104

VALUES NOT ENTERED 1146

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0862
MEAN( 1)=      7.21739    SD( 1)=      4.77774
MEAN( 2)=      4.95111    SD( 2)=      2.12062
```

Table 3-156. (Continued)

(Question 28)
I. Production, Management and Social Sciences
  (32) Miscellaneous arts and sciences
  (23) Personnel and training
  (26) Production and management
  (24) Psychology and human engineering
II. Medical sciences
  (16) Medical sciences
III. Mechanical, Industrial, Civil and Marine Engineering
  (11) Ground transportation equipment
  (13) Installations and constructions
  (18) Military sciences and operations
  (24) Photography and other reproduction processes
  (29) Quartermaster equipment and supplies
  (31) Ships and marine equipment
  (33) Transportation
IV. Aeronautics and Space Technology
  (01) Aircraft and flight equipment
  (12) Guided missiles
  (19) Navigation
V. Electronics and Electrical Engineering
  (05) Communications
  (06) Detection
  (07) Electrical equipment
  (?8) Electronics, electronic equipment
VI. Chemical Science and Materials
  (03) Chemical warfare equipment and materials
  (04) Chemistry
  (10) Fuels and combustion
  (14) Materials (nonmetallic)
  (17) Metallurgy
  (23) Ordnance
VII. Physical Science
  (02) Astronomy, geophysics and geography
  (08) Fluid mechanics
  (20) Nuclear physics and nuclear chemistry
  (21) Nuclear propulsion
  (25) Physics
  (27) Propulsion systems
VIII. Research and Research Equipment
  (30) Research and research equipment
IX. Mathematics
  (15) Mathematics

(Question 16)
I. (15) Requested information source
II. (1) Concepts
III. (9) Raw data
IV. (5) Math aids and formulae; computer programs
V. (3) Designs or design techniques
VI. (4) Experimental processes and procedures
VII. (11) Test processes and procedures
VIII. (13) Evaluation
IX. (7) Specifications
X. (6) Performance and characteristics
XI. (7) Production processes and procedures
XII. (10) Technical status
XIII. (12) Utilization
XIV. (2) Cost and funding; administrative action

Table 3-157. Discovery of Information Available, but Unknown, during Task vs. Desired Class of Information

```
032    IS CROSS TABULATED WITH      016    OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 4233

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIFO)
   2       2       1
   1      14       1


( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
032
   2 •     34    12    12    30    95    1C    29    3C    99   254    23   124    34    84   877
     T•     1     0     C     1     2     7     1     1     2     6     1     3     1     2    21
     R•     4     1     1     3    11     1     3     5    11    29     3    14     4    10   100
     C•    19    26    22    18    21    24    18    16    20    21    22    24    18    20    21
     •
   1 •    145    35    43   125   354    26   130   156   390   970    83   4(0   153   343  3363
     T•     3     1     1     3     8     1     3     4     9    22     2     9     4     R    79
     R•     4     1     1     4    11     1     4     5    12    29     2    12     5    10   100
     C•    81    74    79    82    79    72    82    84    80    79    78    76    82    80    79
     •
   ••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)     1     2     3     4     5     6     7     8     9    10    11    12    13    14
016               2           4           6           8          10          12          14

COLUMN   173          55          449         159         ...9         106         107
TOTAL           47          165          36          186         1224         524          427

PERCENT    4           1          10           3          11           7           4
TOTAL            1           3           0           4          28          12          17

GRAND TOTAL= 4233

CHI-SQUARE (OF TABLE)        9.70015
DF=   13

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0061


MEAN(  1)=     9. 3305   SD(  1)=     3.37304
MEAN(  2)=     1.20553   SD(  2)=     0.40413
```

(Question 32)
I.   (2)   No
II.   (1)   Yes

(Question 16)
I.   (15)   Requested information source
II.   (1)   Concepts
III.   (8)   Raw data
IV.   (5)   Math aids and formulae, computer programs
V.   (3)   Designs or design techniques
VI.   (4)   Experimental processes and procedures
VII.   (11)   Test processes and procedures
VIII. (13)   Evaluation
IX.   (9)   Specifications
X.   (6)   Performance and characteristics
XI.   (7)   Production processes and procedures
XII.   (10)   Technical status
XIII. (12)   Utilization
XIV.   (2)   Cost and funding administrative action

Table 3-158. Interviewer's Assessment of Difficulty in Use of Information vs. Desired Class of Information

```
   Q61   IS CROSS TABULATED WITH   Q16   OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 4233

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2      5       1
     1     14       1
```

```
  ( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
  Q61
    4 *   18    6    4   20   26    4    7   17   22   97    2   45    5   24  501
      T*    0    0    0    0    1    0    0    0    1    2    0    1    5    1    7
      R*    6    2    1    7    9    1    2    6    7   32    2   14    2    8  100
      C*   10   13    7   12    6   11    4    9    4    8    7    8    3    6    7
      
    3 *  116   37   36  111  259   23  110  113  317  837   57  350   32  236 2764
      T*    3    1    1    3    6    1    3    3    7   20    1    9    3    6   65
      R*    4    1    1    4    9    1    4    4   11   30    2   14    5    9  100
      C*   65   79   65   57   58   64   65   61   65   68   54   73   71   55   65
      
    2 *   19    3    7   20   61    6   12   20   60  129   22   45   12   81  497
      T*    0    0    0    0    1    0    0    0    1    3    1    1    0    2   12
      R*    4    1    1    4   12    1    2    4   12   26    4    9    2   16  100
      C*   11    6   13   12   14   17    8   11   12   11   21    9    6   19   12
      
    1 *   26    1    6   14  103    3   30   36   90  161   20   56   37   86  671
      T*    1    0    0    3    2    0    1    1    2    4    0    1    1    2   16
      R*    4    0    1    2   15    0    4    5   13   24    3    8    0   13  100
      C*   15    2   15    8   23    8   19   19   18   13   19   11   20   20   16
      
      ************************************************************************
  ( 1)   1         3         5         7         9        11        13
  Q16         2         4         6         8        10        12        14

COLUMN  179       5       449       159       489       106       87
 TOTAL       47       164        36       166      1224       524      427

PERCENT    4        1        10         3        11         2         4
 TOTAL         1         3         0         4        28        17       10
```

(Question 16)
I.	(15)	Requested information source
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

```
GRAND TOTAL= 4233

CHI-SQUARE (OF TABLE)      144.81960
DF=   39

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.0104
MEAN( 1)=     5.13345    SD( 1)=    3.37304
MEAN( 2)=     2.63600    SD( 2)=    0.85110
```

(Question 61)
I.	(1)	Obvious or prescribed
II.	(2)	Entirely or largely independent of professional judgment
III.	(3)	Entirely or largely dependent upon professional judgment
IV.	(4)	Difficult, because methods and procedures were lacking

Table 3-159. Interviewer's Assessment of Difficulty in Acquisition
of Information vs. Desired Class of Information

```
J62    IS CROSS TABULATED WITH      G16    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1  ...

NUMBER OF REPLICATIONS= 4233

VARIABLE  MAXIMUM  MINIMUM  (AS SPECIFIED)
   2       9        1
   1       14       1
```

```
( 2)             (EXTREME RIGHT VALUE IS ROW TOTAL)
062
   3 •    32    15    7    46    65    6    27    39    56    218   12    99    16    43    684
   T•     1     0     0    1     2     0    1     1     1     5     0     2     0     1     16
   R•     5     2     1    7     10    1    4     6     8     32    2     14    2     7     100
   C•     18    28    13   26    14    17   17    21    11    18    11    19    9     11    16

   2 •    101   28    24   70    223   17   61    63    277   631   54    275   21    206   2696
   T•     2     1     1    2     5     0    2     2     7     15    1     6     3     5     52
   R•     5     1     1    3     10    1    4     4     13    29    2     13    6     9     100
   C•     56    60    44   42    51    47   51    65    57    52    51    52    65    48    52

   1 •    46    6     24   49    156   13   51    64    156   375   40    150   50    173   1353
   T•     1     0     1    1     4     0    1     2     4     9     1     4     1     4     32
   R•     3     0     2    4     12    1    4     5     12    28    3     11    4     13    100
   C•     26    13    44   30    35    36   32    34    32    31    38    29    27    41    32

   •••••••:•••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••• •••••••••••••••
( 1)     1          3          5          7          9          11         13
016             2          4          6          8          10         12         14

COLUMN   179         55         449        159        489        106        87
• TOTAL       47         105        36         186        1224       524        427

PERCENT  4          !          10         3          11         2          4
TOTAL         1          3          0          4          28         12         10
```

GRAND TOTAL= 4233

CHI-SQUARE (OF TABLE)   90.94224
DF=   26

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0414
MEAN(1)=   9.13395   SD(1)=   3.37304
MEAN(2)=   1.84110   SD(2)=   0.67554

(Question 62)
I.   (1)   Quite clear or obvious
II.   (2)   Fairly clear or obvious
III.   (3)   Neither clear nor obvious

(Question 16)
I   (15) Requested information source
II.   (1)   Concepts
III.   (8)   Raw data
IV   (5)   Math aids and formulae, computer programs
V.   (3)   Designs or design techniques
VI   (4)   Experimental processes and procedures
VII   (11) Test processes and procedures
VIII. (13) Evaluation
IX.   (9)   Specifications
X.   (6)   Performance and characteristics
XI.   (7)   Production processes and procedures
XII.   (10) Technical status
XIII. (12) Utilization
XIV.   (2)   Cost and funding, administrative action

Table 3-160. Desired Volume of Transporting Medium vs. Acquisition From First Source

```
Q22     IS CROSS TABULATED WITH     Q17     QA,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5357

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
         2      4      1
         1      5      1
```

```
( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q22
    4 •    21     32    116   1229    609  2205
    T•      0      1      2     23     15    41
    R•      1      1      5     56     37   100
    C•     57     55     49     49     32    41
      •
    3 •      2     11     72    743    326  1154
    T•       0      0      1     14      6    22
    R•       0      1      6     66     26   100
    C•       5     19     31     50     13    22
      •
    2 •     14     15     46    466   1062  1625
    T•       0      0      1      9     70    30
    R•       1      1      3     50     65   100
    C•      38     26     20     19     42    30
      •
    1 •                    1     55    317   373
    T•                     0      1      6     7
    R•                     0     15     85   100
    C•                     0      2     13     7
      •
    •••••••••••••••••••••••••••••••••••••••••
   ( 1)     1             3            5
   Q17             2             4

 COLUMN    37            235          2514
 TOTAL           56            2513

 PERCENT    0             4           46
 TOTAL            1            46
```

(Question 22)
I.   (4) All from recall
II. (1) One report or document
III. (3) A sampling of the reports and documents available
IV. (5) All the reports and documents that could be found pertinent to the question

(Question 17)
I.   (4) Irrelevant or inappropriate information
II. (5) Nothing
III. (3) Reference to another source
IV. (2) Part of the information
V.   (1) All the information needed

```
GRAND TOTAL = 5357

CHI-SQUARE (OF TABLE)       713.30407
DF=   12

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.2571
MEAN( 1)=        4.53535    SD( 1)=        3.69792
MEAN( 2)=        7.96901    SD( 2)=        0.93634
```

Table 3-161. Desired Detail of Transporting Medium vs. Acquisition From First Source

Q25   IS CROSS TABULATED WITH   Q17   Q9.

VARIABLE   2 IS CROSS TABULATED WITH VARIABLE   1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
2   3   1
1   5   1

(2)   (EXTREME LEFT VALUE IS ROW TOTAL)
Q25
  3 •   16   25   111   971   451 1972
  T•   0   0   2   18   16   37
  R•   1   1   6   49   43   100
  C•   38   42   47   39   36   57
  •
  2 •   21   27   99 1340 1507 2394
  T•   0   1   2   25   26   50
  R•   1   1   3   45   53   100
  C•   57   46   42   53   60   56
  •
  1 •   2   7   26   202   136   393
  T•   0   0   0   4   3   7
  R•   1   2   7   51   46   100
  C•   5   12   11   8   6   7
  •
  •••••••••••••••••••••••••••••••••••••
  (1)   1   2   3   4   5
  Q17

COLUMN   57   236   2516
TOTAL   59   2513

PERCENT   0   4   46
TOTAL   1   46

GRAND TOTAL - 5359

CHI-SQUARE (OF TABLE)   47.40470
DF=   8

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLES.

CORRELATION COEFFICIENT =0.0250
MEAN 1=   4.59695   S•D 1=   0.68792
MEAN 2=   2.29434   S•D 2=   0.59565

(Question 25)
I.   (1)   A once over lightly
II.   (3)   A specified answer
III. (7)   A detailed analysis

(Question 17)
I.   (4)   Irrelevant or inappropriate information
II.   (5)   Nothing
III. (3)   Reference to another source
IV.   (2)   Part of the information
V.   (1)   All the information needed

Table 3-162. Actual Composition of Transporting Medium vs. Actual Volume of Transporting Medium

Q18 IS CROSS TABULATED WITH Q21 OR,
VARIABLE 1 IS CROSS TABULATED WITH VARIABLE 2
NUMBER OF REPLICATIONS= 10,989

Q18

	1	2	3	4	Row Total
27	4	32	265	122	423
T	0	0	3	1	4
R	1	8	63	28	100
C	1	2	5	3	4
26	2	24	325	148	499
T	0	0	3	2	5
R	0	5	65	30	100
C	0	1	7	4	5
25	1	6	92	29	128
T	0	0	1	0	1
R	1	5	72	22	100
C	0	0	2	1	1
24	3	278	698	447	1426
T	0	3	6	4	13
R	0	20	49	31	100
C	1	13	14	13	13
23	0	44	52	38	134
T	0	0	1	0	1
R	0	33	39	28	100
C	0	2	11	1	1
22	4	56	122	139	321
T	0	1	1	1	3
R	1	18	38	43	100
C	1	3	2	4	3
21	7	45	121	81	254
T	0	0	1	1	2
R	3	18	48	31	100
C	1	2	3	2	2
20	0	30	22	34	86
T	0	0	0	1	1
R	0	35	26	39	100
C	0	1	1	1	1
19	0	23	35	60	118
T	0	0	0	1	1
R	0	20	30	50	100
C	0	1	1	2	1
18	0	12	132	65	209
T	0	0	1	1	2
R	0	6	63	31	100
C	0	1	3	2	2
17	0	15	125	71	211
T	0	0	1	1	2
R	0	7	59	34	100
C	0	1	3	2	2
16	0	5	24	12	41
T	0	0	0	0	0
R	0	12	59	29	100
C	0	0	1	0	0
15	3	162	128	168	461
T	0	1	1	2	4
R	1	35	28	36	100
C	1	8	3	5	4
14	0	1	8	4	13
T	0	0	0	0	0
R	0	8	62	30	100
C	0	0	0	0	0
13	0	4	11	13	28
T	0	0	0	0	0
R	0	14	39	47	100
C	0	0	0	0	0
12	0	66	51	43	160
T	0	1	1	0	2
R	0	41	32	27	100
C	0	3	1	1	2
11	0	8	24	22	54
T	0	0	0	0	0
R	0	15	44	41	100
C	0	0	1	1	0

	1	2	3	4	Row Total
10	0	4	15	9	28
T	0	0	0	0	0
R	0	14	54	32	100
C	0	0	0	0	0
9	2	145	183	241	571
T	0	1	2	2	5
R	0	25	32	43	100
C	0	7	4	7	5
8	3	184	267	222	676
T	0	2	2	2	6
R	0	27	40	33	100
C	1	9	5	6	6
7	57	45	159	119	380
T	1	0	1	1	3
R	15	12	42	31	100
C	12	2	3	3	3
6	7	68	111	110	296
T	0	1	1	1	3
R	2	23	38	37	100
C	1	3	2	3	3
5	2	17	40	31	90
T	0	0	1	0	1
R	2	19	45	34	100
C	0	1	1	1	1
4	1	55	229	139	424
T	0	1	2	1	4
R	0	13	54	33	100
C	0	3	5	4	4
3	32	534	1020	680	2266
T	0	5	9	6	20
R	1	24	45	30	100
C	7	26	21	19	20
2	0	32	91	84	207
T	0	0	1	1	2
R	0	16	44	40	100
C	0	2	2	2	2
1	363	191	543	388	1485
T	3	2	5	4	14
R	24	13	37	26	100
C	74	9	11	11	14

Question 21 (Codes): 1   2   3   4

COLUMN TOTAL: 491   2086   4893   3519

PERCENT TOTAL: 4%   19%   45%   32%   =   100%

GRAND TOTAL = 10,989

CHI-SQUARE (OF TABLE) = 74,315.13   MEAN (1) = 2.44   SD (1) = .3724
DF = 78
CORRELATION COEFFICIENT = .22   MEAN (2) = 3.44   SD (2) = .2446

(Question 21)
I.	(4)	All from recall
II.	(1)	One report or document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All reports and documents that could be found pertinent to the question
V.		Did not receive chunl

(Question 18)
I.	(22)	Previous knowledge
II.	(9)	Meetings and symposia
III.	(8)	Oral contacts - all other
IV.	(7)	Oral contacts with manufacturers
V.	(15)	Live demonstrations
VI.	(25)	Physics measurement or experiment
VII	(24)	Personal notes, logs and files
VIII.	(11)	Correspondence, memos and TWX
IX.	(4)	Drawings and schematics
X.	(20)	Photographs, maps and files
XI.	(5)	Parts lists
XII.	(23)	Computer printout
XIII.	(26)	Microfilm or microfiche
XIV.	(27)	Slides or motion pictures
XV	(6)	System specification document
XVI	(14)	Newsletters and other mass media
XVII.	(1)	Brochures
XVIII.	(2)	Catalogs
XIX.	(3)	Standards and codes
XX.	(10)	Directives
XXI.	(12)	Handbooks
XXII.	(13)	Manuals
XXIII.	(17)	Proposals
XXIV.	(18)	Reports
XXV.	(16)	Preprints and reprints
XXVI	(21)	Journals
XXVII	(19)	Textbooks

Table 3-163. Actual Composition of Transporting Medium vs. Actual
Detail of Transporting Medium

Q18 IS CROSS TABULATED WITH Q24   OR,
    VARIABLE 1 IS CROSS TABULATED WITH VARIABLE 2
    NUMBERS OF REPLICATIONS = 10999

Q18

		1	2	3	Row Total
27		89	142	192	423
	T	1	1	2	4
	R	21	34	45	100
	C	4	3	5	4
26		134	153	212	499
	T	1	1	2	4
	R	27	31	42	100
	C	7	3	6	4
25		38	41	49	128
	T	0	0	1	1
	R	30	32	38	100
	C	2	1	1	1
24		282	540	606	1428
	T	3	5	5	13
	R	20	38	42	100
	C	14	10	17	13
23		34	62	38	134
	T	0	1	0	1
	R	26	46	28	100
	C	2	1	1	1
22		32	183	106	321
	T	0	2	1	3
	R	10	57	33	100
	C	2	3	3	3
21		46	135	73	254
	T	0	1	1	2
	R	18	53	29	100
	C	2	3	2	2
20		6	54	26	86
	T	1	0	0	1
	R	7	63	30	100
	C	0	1	1	1
19		21	64	33	118
	T	0	1	0	1
	R	18	54	28	100
	C	1	1	1	1
18		42	111	56	209
	T	0	1	1	2
	R	20	53	27	100
	C	2	2	2	2
17		46	105	60	211
	T	0	1	1	2
	R	22	50	28	100
	C	2	2	2	2
16		17	10	14	41
	T	0	0	0	0
	R	42	24	34	100
	C	1	0	0	0
15		65	216	180	461
	T	1	2	1	4
	R	14	47	39	100
	C	3	4	5	4
14		3	4	6	13
	T	0	0	0	0
	R	23	31	46	100
	C	0	0	0	0
13		4	16	8	28
	T	0	0	0	0
	R	14	57	29	100
	C	0	0	0	0
12		15	73	72	160
	T	0	1	0	1
	R	9	46	45	100
	C	1	1	0	1

		1	2	3	Row Total
11		9	32	13	54
	T	0	0	0	0
	R	17	59	24	100
	C	0	1	0	0
10		4	16	8	28
	T	0	0	0	0
	R	14	57	29	100
	C	0	0	0	0
9		76	318	177	571
	T	1	3	2	5
	R	13	56	31	100
	C	4	6	5	5
8		146	363	167	676
	T	1	3	2	6
	R	22	54	24	100
	C	7	7	5	6
7		55	168	157	380
	T	1	1	1	3
	R	14	44	42	100
	C	3	3	4	3
6		47	163	88	298
	T	0	2	1	3
	R	16	55	29	100
	C	2	3	2	3
5		15	46	29	90
	T	0	1	0	1
	R	17	51	32	100
	C	1	1	1	1
4		77	220	128	425
	T	1	2	1	4
	R	18	52	30	100
	C	4	4	4	4
3		480	1178	611	2269
	T	4	11	6	21
	R	21	52	27	100
	C	23	22	17	21
2		49	87	73	209
	T	0	1	1	2
	R	24	42	35	100
	C	2	2	2	2
1		227	825	433	1485
	T	2	8	4	14
	R	15	56	29	100
	C	11	16	12	14

Q24 (Codes)   1   2   3

COLUMN TOTAL   2059   5325   3615

PERCENT TOTAL   19%   48%   33%

GRAND TOTAL = 10,999

CHI-SQUARE (OF TABLE) 409.25
DF = 52

CORRELATION COEFFICIENT = .0622

MEAN (1) = 11.403 SD (1) = 9.3721

MEAN (2) = 2.141 SD (2) = .7043

(Question 18)

I.	(22)	Previous knowledge
II.	(9)	Meetings and symposia
III.	(8)	Oral contacts - all other
IV.	(7)	Oral contacts with manufacturers
V.	(15)	Live demonstrations
VI.	(25)	Physical measurement or experiment
VII.	(24)	Personal notes, logs and files
VIII.	(11)	Correspondence, memos and TWX
IX.	(4)	Drawings and schematics
X.	(20)	Photographs, maps and files
XI.	(5)	Parts lists
XII.	(23)	Computer printout
XIII.	(26)	Microfilm or microfiche
XIV.	(27)	Slides or motion pictures
XV.	(6)	System specification document
XVI.	(14)	Newsletters and other mass media
XVII.	(1)	Brochures
XVIII.	(2)	Catalogs
XIX.	(3)	Standards and codes
XX.	(10)	Directives
XXI.	(12)	Handbooks
XXII.	(13)	Manuals
XXIII.	(17)	Proposals
XXIV.	(18)	Reports
XXV.	(16)	Preprints and reprints
XXVI.	(21)	Journals
XXVII.	(19)	Textbooks

(Question 24)

I.	(1)	A once over lightly
II.	(3)	A specific answer
III.	(2)	A detailed analysis

Table 3-164. Desired Volume of Transporting Medium vs. Actual Volume of Transporting Medium

```
   -Q22   IS CROSS TABULATED WITH      -Q21   OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF APPLICATIONS- 5359       _ _ _

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       2       4       1
       1       5       1


  ( 2)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
 -Q22
    4 •      6      51     646   1492 2195
    T•      0       1      12     28    41
    R•     _0       2      29     68 _100
    C•      2       4      32     95    41
     •
    3 •      2      35    1102     14 1153
    T•      0       1      21      0    22
    R•      0       3      96      1   100
    C•      1 __    3      54 __   1 __22 __
     •
    2 •      5    1277     272     68 1622
    T•      0      24       5      :    30
    R•      0      79      17      4   100
    C•      1      94      13      4    30
     •
    1 •    350       1      13      1   373
    T•      7       0       0      0     7
    R•     96       0       3      0   100
    C•     96       C       1      0     7
     •
      ••••••••••••••••••••••••••••••••
  ( 1)      1               3
 -Q21              2               4

 COLUMN    371           2033
 TOTAL            1364          1575

 PERCENT     7             38
 TOTAL             26             29
```

(Question 22)
I.   (4)   All from recall
II.   (1)   One report or document
III. (2)   A sampling of the reports and documents available
IV.   (3)   All the reports and documents that could be found
            pertinent to the question

(Question 21)
I.   (4)   All from recall
II   (1)   One report of document
III. (2)   A sampling of the reports and documents available
IV.   (3)   All reports and documents that could be found
            pertinent to the question

```
GRAND TOTAL= 5343

CHI-SQUARE (OF TABLE)     10392.47803
DF=    9

VALUES NOT ENTERED  16
   CASE NO.     VARIABLE  2     VARIABLE  1
     408             •               6
     458             0               2
    1303             0               0
    1614             4               0
    1765             4               0
    1945             4               0
    1962             2               0
    1966             2               0
    1985             4               0
    2947             4               0
    2986             4               0
    3630             2               0
    3859             3               0
    4755             5               0
    4766             4               0
    4792             4               0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.8774
MEAN(  1)=     2.89233    SD(  1)=     0.91612
MEAN(  2)=     2.96790    SD(  2)=     0.99780
```

Table 3-165. Actual Detail of Transporting Medium vs.
Actual Volume of Transporting Medium

```
     -Q24   IS CROSS TABULATED WITH     -Q21   OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2       3       1
   1       4       1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
-Q24
   3 •     79    417   650   551 1697
   T•       1      8    12    10   32
   R•       5     25    38    32  100
   C•      21     31    32    35   32
     •
   2 •    262    791   786   867 2706
   T•       5     15    15    16   51
   R•      10     29    29    32  100
   C•      71     58    39    55   51
     •
   1 •     30    157   597   157  941
   T•       1      3    11     3   18
   R•       3     17    63    17  100
   C•       8     12    29    10   18
     •
   •••••••••••••••••••••••••••••••••
( 1)     1            3
-Q21            2           4

COLUMN   371        2033
TOTAL         1365        1575

PERCENT    7         38
TOTAL          26          29

GRAND TOTAL= 5344

CHI-SQUARE (OF TABLE)      395.71941
DF=   6
```

(Question 24)
I.   (1)   A once over lightly
II.   (3)   A specific answer
III. (2)   A detailed analysis

(Question 21)
I.   (4)   All from recall
II.   (1)   One report of document
III. (2)   A sampling of the reports and documents available
IV.   (3)   All reports and documents that could be found
               pertinent to the question

```
VALUES NOT ENTERED  15
  CASE NO.      VARIABLE  2    VARIABLE  1
    408             1             0
   1303             1             0
   1614             1             0
   1765             1             0
   1945             1             0
   1962             2             0
   1966             1             0
   1985             2             0
   2947             1             0
   2986             1             0
   3630             2             0
   3859             2             0
   4755             1             0
   4766             1             0
   4792             1             0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0441
MEAN( 1)=   2.89233   SD( 1)=     0.91612
MEAN( 2)=   2.13902   SD( 2)=     0.68925
```

Table 3-166.　Actual Layout of Transporting Medium vs. Actual Volume of Transporting Medium

```
Q2t    IS CROSS TABULATED WITH      Q21      3R,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5290

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2      17       1
     1       4       1


( 2)              (EXTREME RIGHT VALUE IS RAW TOTAL)
Q26
   17 *          8     8    1    17
   T*            0     0    0     0
   R*           47    47    6   100
   C*            1     0    0     0
    *
   16 *    1     1          2     4
   T*      0     0          0     0
   R*     25    .5         50   100
   C*      C     0          0     0
    *
   15 *                     3     3
   T*                       0     0
   R*                     100   100
   C*                       0     0
    *
   14 *    2   144   193  124   463
   T*      0     3    .      2     9
   R*      0    31   42    27   100
   C*      1    :1    10    8     9
    *
   13 *    P    16   131   40   195
   T*      0     C     2    1     4
   R*      4     b    67   41   100
   C*      2     1     7    3     4
    *
   12 *    1    80   257  127   465
   T*      0     2     5     2     9
   R*      C    17    55    77   100
   C*      C     6    13     8     9
```

(Question 26)
I.　(14)　Recall
II.　(13)　Telephone conversation
III　(11)　Group discussion
IV　(4)　Photographs
V.　(3)　Graphics (diagrams, drawings, etc.)
VI.　(2)　Tables or lists
VII.　(1)　Narrative text
VIII.　(18)　Narrative text and tables or lists
IX.　(9)　Graphics and lists
X.　(8)　Photographs and text
XI.　(7)　Graphics and text
XII.　(16)　Graphics, text and oral
XIII　(17)　Graphics, text, oral, and recall
XIV.　(12)　Informal briefing, with chalk or pencil drawings
XV.　(5)　Microfilm - microfiche
XVI.　(6)　Slides or motion pictures
XVII.　(10)　Formal briefing or lecture

(Question 21)
I.　(4)　All from recall
II.　(1)　One report of document
III.　(2)　A sampling of the reports and documents available
IV.　(3)　All reports and documents that could be found pertinent to the question

```
    *
   11 *   13   287   557  503 1400
   T*      0     5    11   10    26
   R*      1    21    40   36    25
   C*      4    21    36   32    26
    *
   10 *        10    29    12    51
   T*           0     1     0     1
   R*          20    47    24   100
   C*           1     1     1     1
    *
    9 *    1        51    47  128
   T*      C     2     1     1     .
   R*      0    28     7    34   100
   C*      C     3     1     3     1
    *
    8 *        20    16    16    53
   T*           0     0     0     1
   R*          54    43    35   100
   C*           1     1     1     1
    *
    .        4   256   245  154   659
   T*      C     2     2     4    13
   R*      1    37    15    28   100
   C*      1    10    12    12    13
    *
    6 *    5   106   129  132   427
   T*      0     1     2     2     3
   R*      1    53    30    42   100
   C*      1    12     6     8     3
    *
    5 *    1   145   105  134   41
   T*      0     3     2     3     1
   R*      C    35    26    36   100
   C*      C    11     6    10     4
    *
    4 *         1     4     3     1
   T*           0     0     0     0
   R*          13    50    38   100
   C*           0     0     0     0
```

```
    *
    3 *         56    84    47  197
   T*            1     2     1     4
   R*           50    45    25  100
   C*            4     4     4     4
    *
    2 *         48    47    2,  123
   T*            1     1     1     2
   R*           39    34    27  100
   C*            4     2     2     2
    *
    1 *    24   72   113  111  c34
   T*            1     2     2    12
   R*      5    12    18    18  100
   C*     90     2     2     7    12
    *
************************************
( 1)         1          3          4
Q21

COLUMN      37C        2010
TOTAL            1352          1557

PERCENT      6           37
TOTAL            28            29

GRAND TOTAL= 5290

CHI-SQUARE (OF TABLE)        2627.50992
DF=  48

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME A F EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2746
MEAN(  1)=       2.95858   SD(  1)=       0.90540
MEAN(  2)=       8.24835   SD(  2)=       4.12090
```

Table 3-167. Desired Layout of Transporting Medium vs.
Actual Volume of Transporting Medium

-Q27   IS CROSS TABULATED WITH   Q-21   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2   17   0
   1   4   0

(Question 27)
I.   (14)   Recall;
II.   (13)   Telephone conversation
III.   (11)   Group discussion
IV.   (4)   Photographs
V.   (3)   Graphics (maps, graphs, etc.)
VI.   (2)   Tables or lists
VII.   (1)   Narrative text
VIII.   (15)   Narrative text and tables or lists
IX.   (9)   Graphics and lists
X.   (8)   Photographs and text
XI.   (7)   Graphics and text
XII.   (16)   Graphics, text and oral
XIII.   (17)   Graphics, text, oral, and recall
XIV.   (12)   Informal briefing, with chalk or pencil drawings
XV.   (5)   Microfilm - microfiche
XVI.   (6)   Slides or motion pictures
XVII.   (10)   Formal briefing or lecture
(Question 21)
I.   (4)   All from recall
II   (1)   One report of document
III.   (2)   A sampling of the reports and documents available
IV.   (3)   All reports and documents that could be found
        pertinent to the question

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
-Q27

17 *		11	14	6	31
T*		0	0	0	1
R*		35	45	19	100
C*		1	1	0	1
16 *	1	1	5	3	10
T*	0	0	0	0	0
R*	10	10	50	30	100
C*	0	0	0	0	0
15 *	2	1		4	3	10
T*	0	0		0	0	0
R*	20	10		40	30	100
C*	13	0		0	0	0
14 *		1	115	117	108	341
T*		0	2	2	2	6
R*		0	34	34	32	100
C*		0	8	6	7	6
13 *		5	15	83	27	130
T*		0	0	2	1	2
R*		4	12	64	21	100
C*		1	1	4	2	2
12 *	1	1	75	209	107	393
T*	0	0	1	4	2	7
R*	0	0	19	53	27	100
C*	7	0	5	10	7	7

11 *	3	18	370	738	554	1633
T*	0	0	6	14	10	30
R*	0	1	20	45	34	100
C*	20	5	23	36	35	30
10 *		1	11	42	15	69
T*		0	0	1	0	1
R*		1	16	61	22	100
C*		0	1	2	1	1
9 *			39	57	52	148
T*			1	1	1	3
R*			26	39	35	100
C*			3	3	3	3
8 *	1		21	20	17	59
T*	0		0	0	0	1
R*	2		36	34	29	100
C*	7		2	1	1	1
7 *	5	5	266	260	198	734
T*	0	0	5	5	4	14
R*	1	1	36	35	27	100
C*	33	1	19	13	13	14
6 *		5	170	156	146	477
T*		0	3	3	3	9
R*		1	35	33	31	100
C*		1	12	8	9	9
5 *	1	2	159	138	166	465
T*	0	0	3	3	3	9
R*	0	0	34	30	36	100
C*	7	1	12	7	11	9
4 *			1	4	6	11
T*			0	0	0	0
R*			2	36	55	100
C*			0	0	0	0

3 *		1	43	56	39	139
T*		0	1	1	1	3
R*		1	31	40	28	100
C*		0	3	3	2	3
2 *	1		39	19	21	80
T*	0		1	0	0	1
R*	1		49	24	26	100
C*	7		3	1	1	1
1 *		330	70	104	99	603
T*		6	1	2	2	11
R*		55	12	17	16	100
C*		89	5	5	6	11
0 *	1		9	7	4	25
T*	0		0	0	0	0
R*	4		36	28	32	100
C*	7		1	0	1	0

   ****
(1)   0   1   2   3   4
Q-21

COLUMN   15   1365   1575
TOTAL   171   2033

PERCENT   0   25   29
TOTAL   7   38

GRAND TOTAL= 5359

CHI-SQUARE (OF TABLE)   2839.50989
DF=   68

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.2784
MEAN(1)=   2.89233   SD(1)=   0.91612
MEAN(2)=   8.21571   SD(2)=   1.97924

Table 3-168.   Class of Information vs. Actual Volume of Transporting Medium

```
Q28    IS CROSS TABULATED WITH    Q21    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2      14       1
   1       4       1
```

(Question 28)		
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding, administrative action

(Question 21)		
I.	(4)	All from recall
II.	(1)	One report of document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All reports and documents that could be found pertinent to the question

```
( 2)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q28
14 *      3    44    60    52   159
 T*       0     1     1     1     1
 R*       2    28    38    33   100
 C*       1     3     3     3     3
   *
13 *     32    44    71    41   188
 T*       1     1     1     1     4
 R*      17    23    38    22   100
 C*       9     3     3     3     4
   *
12 *     15    67   147    98   327
 T*       0     1     3     2     6
 R*       5    20    45    30   100
 C*       4     5     7     6     6
   *
11 *     21    45    80    78   224
 T*       0     1     1     1     4
 R*       9    20    36    35   100
 C*       6     3     4     5     4
   *
10 *     79   301   579   385  1344
 T*       1     6    11     7    25
 R*       6    22    43    29   100
 C*      21    22    28    24    25
   *
 9 *     20   321   207   263   811
 T*       0     6     4     5    15
 R*       2    40    26    32   100
 C*       5    24    10    17    15
   *
 8 *     24    39    94    41   198
 T*       0     1     2     1     4
 R*      13    21    45    22   100
 C*       6     3     4     3     4
   *
 7 *     37    62    73    63   235
 T*       1     1     1     1     4
 R*      16    26    31    27   100
 C*      10     5     4     4     4
   *
 6 *     18    37    78    54   187
 T*       0     1     1     1     3
 R*      10    20    42    29   100
 C*       5     3     4     3     3
   *
 5 *     41   125   181   200   547
 T*       1     2     3     4    10
 R*       7    23    33    37   100
 C*      11     9     9    13    10
   *
 4 *     47   102   150    86   385
 T*       1     2     3     2     7
 R*      12    26    39    22   100
 C*      13     7     7     5     7
   *
 3 *      2   112   132   124   370
 T*       0     2     2     2     7
 R*       1    30    36    34   100
 C*       1     8     6     8     7
   *
 2 *     32    66   191    89   378
 T*       1     1     4     2     7
 R*       8    17    51    24   100
 C*       9     4     9     6     7
   *
 ******************************************
( 1)      1           3           4
Q21

COLUMN   371         2033
 TOTAL        1365         1574

PERCENT    7           38
 TOTAL        26          29
```

GRAND TOTAL = 5343

CHI-SQUARE (OF TABLE) 340.97798
C   36

VALUES NOT ENTERED 16

CASE NO.	VARIABLE 2	VARIABLE 1
408	9	0
1303	9	0
1614	8	0
1765	10	0
1945	3	0
1962	14	0
1966	10	0
1985	3	0
2947	13	0
2986	4	0
3630	10	0
3859	12	0
4427	0	4
4755	10	0
4766	4	0
4792	10	0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
CORRELATION COEFFICIENT  0.0057
MEAN( 1)=    2.89233    SD( 1)=    0.91612
MEAN( 2)=    7.90035    SD( 2)=    3.31766
```

Table 3-169. Field of Information vs. Actual
Volume of Transporting Medium

Q29   IS CROSS TABULATED WITH   Q21   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
2   9   1
1   4   1

(Question 21)
I   (4)   All from recall
II   (1)   One report of document
III   (2)   A sampling of the reports and documents available
IV   (3)   All reports and documents that could be found pertinent to the question

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q29

9 *	21	43	64	41	169
T*	0	1	1	1	3
R*	12	25	38	24	100
C*	6	3	3	3	3
*					
8 *	49	129	152	118	448
T*	1	2	3	2	8
R*	11	29	34	26	100
C*	13	9	8	8	8
*					
7 *	25	190	307	221	743
T*	0	4	6	4	14
R*	3	26	41	30	100
C*	7	14	15	14	14
*					
6 *	49	176	288	195	708
T*	1	3	5	4	13
R*	7	25	41	28	100
C*	13	13	14	12	13
*					
5 *	88	330	483	387	1288
T*	2	6	9	7	24
R*	7	26	38	30	100
C*	24	24	24	25	24
*					
4 *	64	238	317	280	899
T*	1	4	6	5	17
R*	7	26	35	31	100
C*	17	17	16	18	17
*					
3 *	17	101	133	103	354
T*	0	2	3	2	7
R*	5	29	38	29	100
C*	5	7	7	7	7
*					
2 *	7	19	43	26	95
T*	0	0	1	0	2
R*	7	20	45	27	100
C*	2	1	2	2	2
*					
1 *	49	135	233	198	615
T*	1	3	4	4	12
R*	8	22	38	32	100
C*	13	10	12	13	12

****

(1)   1   3
Q21   2   4

COLUMN   169   2020
TOTAL   1361   1569

PERCENT   7   38
TOTAL   26   29

GRAND TOTAL= 5319

CHI-SQUARE (OF TABLE)   57.76717
DF=   24

VALUES NOT ENTERED 40

CASE NO.	VARIABLE 2	VARIABLE 1
408	6	0
670	0	3
46?	0	3
467	0	3
472	0	2
716	0	3
995	0	3
1295	0	2
1303	5	0
1614	6	0
1765	7	0
1880	0	3
1895	0	3
1945	6	0
196?	5	0
1966	7	0
1985	3	0

(Question 29)
I.   Production, Management and Social Sciences
  (32)   Miscellaneous arts and sciences
  (23)   Personnel and training
  (26)   Production and management
  (28)   Psychology and human engineering

II.   Medical Sciences
  (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
  (11)   Ground transportation equipment
  (13)   Installations and constructions
  (18)   Military sciences and operations
  (24)   Photography and other reproduction processes
  (29)   Quartermaster equipment and supplies
  (31)   Ships and marine equipment
  (33)   Transportation

IV.   Aeronautics and Space Technology
  (01)   Aircraft and flight equipment
  (12)   Guided missiles
  (19)   Navigation

V.   Electronics and Electrical Engineering
  (05)   Communications
  (06)   Detection
  (07)   Electrical equipment
  (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
  (03)   Chemical warfare equipment and materials
  (04)   Chemistry
  (10)   Fuels and combustion
  (14)   Materials (nonmetallic)
  (17)   Metallurgy
  (22)   Ordnance

VII.   Physical Science
  (02)   Astronomy, geophysics and geography
  (09)   Fluid mechanics
  (20)   Nuclear physics and nuclear chemistry
  (21)   Nuclear propulsion
  (25)   Physics
  (27)   Propulsion systems

VIII.   Research and Research Equipment
  (30)   Research and research equipment

IX.   Mathematics
  (15)   Mathematics

2582	0	4
2587	0	1
2592	0	2
2787	0	3
2833	0	3
2836	0	3
2871	0	3
2947	4	0
2986	7	0
2996	0	4
3207	0	4
3209	0	4
3214	0	3
3404	0	4
3532	0	3
3630	5	0
3859	6	0
4386	0	2
4600	0	1
4755	1	0
4766	7	0
4792	1	0
5281	0	4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0317
MEAN(1)=   2.69233   SD(1)=   0.91617
MEAN(2)=   4.95111   SD(2)=   2.12062

Table 3-170. Essentiality of Information to Task vs. Actual Volume of Transporting Medium

```
    Q30 __ IS CROSS TABULATED WITH      Q21     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5344

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2       4      1
    1       4      1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q30
    4 •    289  1068  1504  1323 4184
    T•       5    20    28    25   78
    R•       7    26    36    32  100
    C•      78    78    74    84   78
    •
    3 •     56   225   418   207  906
    T•       1     4     8     4   17
    R•       6    25    46    23  100
    C•      15    16    21    13   17
    •
    2 •     24    61   104    41  230
    T•       0     1     2     1    4
    R•      10    27    45    18  100
    C•       6     4     5     3    4
    •
    1 •      2    11     7     4   24
    T•       0     0     0     0    0
    R•       8    46    29    17  100
    C•       1     1     0     0    0
    •
     ••••••••••••••••••••••(=======••••••••
( 1)        1           3
Q21                 2           4

COLUMN     371        2033
  TOTAL         1465         1575

PERCENT      6          38
  TOTAL          25          29
```

(Question 21)
I   (4)   All from. recall
II   (1)   One report of document
III   (2)   . sampling of the reports and documents available
IV.   (3)   All reports and documents that could be found
                pertinent to the question

(Question 30)
I   (4)   Neither essential nor helpful to successful task completion
II   (3)   Not essential, but somewhat helpful to successful task completion
III. (2)   Not essential, but extremely helpful to successful task completion
IV.   (1)   Absolutely essential to successful task completion

```
GRAND TOTAL= 5344

CHI-SQUARE (OF TABLE)        65.01152
DF=    9

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0579
MEAN(  1)=      2.93045  SD(  1)=      0.90448
MEAN(  2)=      3.73091  SD(  2)=      0.55656
```

Table 3-171.   Extensiveness of Information Use in Task vs.
Actual Volume of Transporting Medium

```
    Q31    IS CROSS TABULATED WITH      Q21     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5344

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      6       1
    1      4       1


 ( 2)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
Q31
    6 *     159    592    742    703  2196
    T*        3     11     14     13    44
    R*        7     27     34     32   100
    C*       43     43     36     45    41
      *
    5 *     136    417    697    585  1835
    T*        3      8     13     11    34
    R*        7     23     38     32   100
    C*       37     31     34     37    34
      *
    4 *      31    197    257    138   623
    T*        1      4      5      3    12
    R*        5     32     41     22   100
    C*        8     14     13      9    12
      *
    3 *      44    132    306    134   616
    T*        1      2      0      3    12
    R*        7     21     50     22   100
    C*       12     10     15      9    12
      *
    2 *            17     18     12    47
    T*             0      0      0     1
    R*            36     38     26   100
    C*             1      1      1     1
      *
    1 *      1     10     13      3    27
    T*        0      0      0      0     1
    R*        4     37     48     11   100
    C*        0      1      1      0     1
```

<div style="float:right">

(Question 31)

I.	(6)	Not at all
II.	(5)	As a lead to other information
III.	(4)	As background information
IV.	(3)	In only small parts of the task
V.	(2)	In major portions of the task
VI.	(1)	Throughout the entire duration of the task

(Question 21)

I.	(4)	All from recall
II	(1)	One report of document
III.	(2)	A sampling of the reports and documents available
IV	(3)	All reports and documents that could be found pertinent to the question

</div>

```
    *
  ( 1)       1               3
Q21                 2               4

COLUMN     371           2033
 TOTAL          1365           1575

PERCENT      6            38
 TOTAL            25            29

GRAND TOTAL= 5344

CHI-SQUARE (OF TABLE)       102.34516
DF=   15

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.0282
MEAN( 1)=      2.90049   SD( 1)=      0.90448
MEAN( 2)=      5.C1722   SD( 2)=      1.07168
```

Table 3-172. Usefulness of Title Listings or Abstracts vs. Desired Volume of Transporting Medium

```
    23    IS CROSS TABULATED WITH      22    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2       3       1
     1       4       1


( 2)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
 23
   1 *       5    109   303    669 1246
   T*        0      4     7     12   73
   R*        0     15    31     54  100
   C*        1     12    33     30   23
     *
   2 *      28    265   316    433 1047
   T*        1      5     6      8   20
   R*        3     25    30     42  100
   C*        8     16    27     20   20
     *
   3 *     340   1171   455   1398 3064
   T*        6     22     8     20   57
   R*       11     38    15     36  100
   C*       91     72    33     50   57
     *
    ****************************************
( 1)        1           3
 22                 2           4

COLUMN     373          1154
 TOTAL           1625          2205

PERCENT      7            22
 TOTAL            30           41

GRAND TOTAL=  5357

CHI-SQUARE (OF TABLE)       563.51508
DF=   6
```

(Question 23)
I.   (3)   Would not have been useful
II.   (2)   Would have found them useful
III.   (1)   Used them for this check

(Question 22)
I.   ( )   All from recall
II.   (.)   One report or document
III.   (2)   A sampling of the reports and documents available
IV.   (3)   All the reports and documents that could be found pertinent to the question

```
VALUES NOT ENTERED   2
  CASE NO.     VARIABLE  2      VARIABLE  1
   458              2              0
   1303             1              0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.2630
MEAN(  1)=      2.96700   SD(  1)=      0.99780
MEAN(  2)=      1.66057   SD(  2)=      0.83028
```

Table 3-173. Desired Detail of Transporting Medium vs.
Volume of Transporting Medium

Q25 IS CROSS TABULATED WITH Q22 ON.

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE :

NUMBER OF REPLICATIONS= 5557

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
    2   3   1
    1   4   1

```
( 2)                  (EXTREME RIGHT VALUE IS ROW TOTAL)
Q25
___3 •     79    559    466    660  1572
   T•       1     10      9     16    37
   R•       4     28     24     44   100
___C•      71     ~~     40     39    37
     •
   2 •    268    951    558   1226  2993
   T•       5     18     10     23    57
   R•       9     32     16     41   100
   C•      72     59     47     56    56
     •
___I •     26    105    150    111   392
   T•       0      2      3      2     7
   R•       7     27     38     28   100
___C•       7      4     13      5     7
     •
     •••••••••••••••••••••••••••••••••
( 1)       1            3
Q22               2            4

COLUMN    373         1156
TOTAL           1625        2705

PERCENT    •           21
TOTAL           34           49

GRAND TOTAL= 5557

CHI-SQUARE (OF TABLE)      148.57561
DF=    6
```

(Question 25)
I.   (1)   A once over lightly
II.   (3)   A specified answer
III. (2)   A detailed analysis

(Question 22)
I.   (4)   A2 from recall
II.   (1)   One report or document
III. (2)   A sampling of the reports and documents available
IV.   (3)   All the reports and documents that could be found
             pertinent to the question

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT   0.6774
MEAN(1)=   2.96901   SD(1)=   0.94654
MEAN(2)=   2.29494   SD(2)=   0.59529

Table 3-174. Desired Layout of Transporting Medium vs. Desired Volume of Transporting Medium

```
____Q27____IS CROSS TABULATED WITH      Q22    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5333

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2     17       1
    1      4       1
```

```
( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q27
 17 •           11    9    11    31
  T•            0     0    0     1
  R•            35    29   35    100
  C•            1     1    1     1
    •
 16 •     1     2     2     5     10
  T•      0     0     0     0     0
  R•      10    20    20    50    100
  C•      0     0     0     0     0
    •
 15 •                 3     7     10
  T•                  0     0     0
  R•                  30    70    100
  C•                  0     0     0
    •
 14 •     1     120   78    142   341
  T•      0     2     1     3     6
  R•      0     35    23    42    100
  C•      0     7     7     6     6
    •
 13 •     5     16    67    42    130
  T•      0     0     1     1     2
  R•      4     12    52    32    100
  C•      1     1     6     2     2
    •
 12 •     4     106   128   155   393
  T•      0     2     2     3     7
  R•      1     27    33    39    100
  C•      1     7     11    7     7
```

```
 11 •     17    391   406   819   1633
  T•      0     7     8     15    31
  R•      1     24    25    50    100
  C•      5     24    35    37    31
    •
 10 •           22    16    30    68
  T•            0     0     1     1
  R•            32    24    44    100
  C•            1     1     1     1
    •
  9 •           47    37    64    148
  T•            1     1     1     3
  R•            32    25    43    100
  C•            3     3     3     3
    •
  8 •           24    12    23    59
  T•            0     0     0     1
  R•            41    20    39    100
  C•            1     1     1     1
    •
  7 •     3     299   134   298   734
  T•      0     6     3     6     14
  R•      0     41    18    41    100
  C•      1     19    12    14    14
    •
  6 •     4     202   80    191   477
  T•      0     4     2     4     9
  R•      1     42    17    40    100
  C•      1     13    7     9     9
    •
  5 •     3     203   59    201   466
  T•      0     4     1     4     9
  R•      1     44    13    43    100
  C•      1     13    5     9     9
    •
  4 •           2     3     6     11
  T•            0     0     0     0
  R•            18    27    55    100
  C•            0     0     0     0
```

(Question 27)
I	(14)	Recall
II.	(13)	Telephone conversation
III.	(11)	Group discussion
IV.	(4)	Photographs
V	(3)	Graphics (maps, graphs, etc.)
VI.	(2)	Tables or lists
VII.	(1)	Narrative text
VIII.	(18)	Narrative text and tables or lists
IX.	(9)	Graphics and lists
X	(8)	Photographs and text
XI.	(7)	Graphics and text
XII.	(16)	Graphics, text and oral
XIII.	(17)	Graphics, text, oral, and recall
XIV.	(12)	Informal briefing, with chalk or pencil drawings
XV.	(5)	Microfilm - microfiche
XVI.	(6)	Slides or motion pictures
XVII.	(10)	Formal briefing or lecture

(Question 22)
I.	(4)	All from recall
II.	(1)	One report or document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All the reports and documents that could be found pertinent to the question

```
  *
 3 *      1    50    33    55    139
  T*      0    1     1     1     3
  R*      0    35    23    39    100
  C*      0    3     2     2     3
  *
 2 *      40   15    10    18    83
  T*      0    0     0     0     1
  R*      48   18    12    21    100
  C*      10   0     0     0     1
  *
 1 •      294  115   77    138   624
  T*      5    2     1     2     11
  R*      47   18    12    22    100
  C*      78   8     6     6     11
  *
*************************************
( 1)      1          3
Q22            2           4

COLUMN    373        1154
TOTAL          1625       2205

PERCENT   6          21
TOTAL          30          41

GRAND TOTAL = 5357
```

Table 3-175.   Class of Information vs. Desired Volume
of Transporting Medium

```
    028     IS CROSS TABULATED WITH      022    OP,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS=   159

VARIABLE : V'  'M MINIMUM (AS SPECIFIED)
        2     !'      1
        1     4       1


 ( 2)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
 028
    14 *      3    52    35    7C   160
     T*       C     1     1     1     3
     R*       2    32    22    44   100
     C*       1     3     3     3     1
      *
    13 *     32    48    52    57   189
     T*       1     1     1     1     4
     R*      17    25    28    30   100
     C*       9     3     5     3     4
      *
    12 *     15    79    80   154   328
     T*       C     1     !     3     6
     R*       5    24    24    47   100
     C*       4     5     7     7     6
      *
    11 *     23    56    47    98   274
     T*       C     1     1     2     4
     R*      10    25    21    44   100
     C*       6     3     4     4     4
      *
    10 *     76   378   337   558  1349
     T*       1     7     6    10    25
     R*       6    28    25    41   100
     C*      20    23    25    25    25
      *
     9 *     19   365   115   313   812
     T*       0     7     2     6    15
     R*       2    45    14    39   100
     C*       5    22    10    14    12
      *
     8 *     24    50    46    69   189
     T*       0     1     1     1     4
     R*      13    26    24    37   100
     C*       6     3     4     3     4
      *
     7 *     38    69    51    77   235
     T*       1     1     1     1     4
     R*      16    29    22    33   100
     C*      10     4     4     3     4
      *
     6 *     19    46    38    85   187
     T*       C     1     1     2     3
     R*      10    25    20    45   100
     C*       5     3     3     4     3
      *
     5 *     42   144    95   276   547
     T*       1     3     2     5    10
     R*       8    26    16    50   100
     C*      11     9     7    1~    10
      *
     4 *     46   120    95   176   387
     T*       !     2     2     2     7
     R*      12    31    25    33   100
     C*      12     7     8     6     7
      *
     3 *      2   133    61   176   372
     T*       0     2     1     3     7
     R*       1    36    16    47   100
     C*       1     8     5     8     7
      *
     2 *     35    85   112   145   377
     T*       4     2     2     3     7
     R*       9    23    30    38   100
     C*       9     5    10     7     7
      *
          ********,3*********************
  ( 1)     1     2            3
  022                             4

COLUMN    372         1154
 TOTAL         1625        2204

PERCENT     7          22
 TOTAL         30           41
```

(Question 28)
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulas, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding; administrative action

(Question 22)
I.	(4)	All from recall
II.	(1)	One report or document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All the reports and documents that could be found
,		pertinent to the question

```
GRAND TOTAL = 5356

CHI-SQUARE (OF TABLE)        329.28347
DF=   36

VALUES NOT ENTERED    3
  CASE NO.    VARIABLE  2     VARIABLE  1
    458            2               0
   1303            9               0
   4427            0               4

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  C.0027
MEAN(  1)=     2.96790   SD(  1)=     0.99780
MEAN(  2)=     7.90035   SD(  2)=     3.31766
```

Table 3-176. Discovery of Information Available, but Unknown, during Task vs. Desired Volume of Transporting Medium

Q32   IS CROSS TABULATED WITH   Q22   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5357

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
```
      2         2        1
      1         4        1
```

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q32
```
     2 *    43   255   258   536  1072
     T*      1     5     5    10    20
     R*      4    23    24    49   100
     C*     12    16    22    24    20
     *
     1 *   330  1370   896  1669  4265
     T*      6     2    17     7    80
     R*      8     1    21     8   100
     C*     88     4    78    26    80
     *
```
     ****
(1)   1   3
Q22   2   4

COLUMN   373   1154
  TOTAL   1625   2205

PERCENT   6   21
  TOTAL   30   41

GRAND TOTAL= 5357

CHI-SQUARE (OF TABLE)   63.75744
DF=   3

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.1064

(Question 32)
I.   (2)   No
II.   (1)   Yes

(Question 22)
I.   (4)   All from recall
II.   (1)   One report or document
III.   (2)   A sampling of the reports and documents available
IV.   (3)   All the reports and documents that could be found pertinent to the question

```
MEAN( 1)=     2.96901   SD( 1)=     0.99634
MEAN( 2)=     1.20385   SD( 2)=     0.40289
```

Table 3-177. Interviewer's Assessment of Difficulty in Use of Information vs.
Desired Volume of Transporting Medium

```
    Q61    IS CROSS TABULATED WITH      Q22    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER UF REPLICATIONS= 5357

VARIABLE KAXIMUM MINIMUN  (AS SPECIFIED)
     2       5       1
     1       4       1


( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q61
    4 *    21    101    93    169   384
    T*      0      2     2      3     7
    R*      5     26    24     44   100
    C*      6      6     6      8     8
    *
    3 *   250   1027   765   1519  3561
    T*      5     19    14     28    66
    R*      7     29    21     43   100
    C*     67     63    66     69    66
    *
    2 *    27    196   150    237   610
    T*      1      4     3      4    11
    R*      4     32    25     39   100
    C*      7     12    13     11    11
    *
    1 *    75    301   145    280   802
    T*      1      6     5      5    15
    R*      9     38    18     35   100
    C*     20     19    13     13    15
    *
    ********************************
   ( 1)    1           3
   Q22              2           4

COLUMN   373         1154
TOTAL          1625         2205

PERCENT    J           21
TOTAL           30           41
```

(Question 61)
I.   (1) Obvious or prescribed
II.   (2) Entirely or largely independent of professional judgment
III. (3) Entirely or largely dependent upon professional judgment
IV.   (4) Difficult, because methods and procedures were lacking

(Question 22)
I.   (4) All from recall
II.   (1) One report or document
III. (2) A sampling of the reports and documents available
IV.   (3) All the reports and documents that could be found
           pertinent to the question

```
GRAND TOTAL =  5357

CHI-SQUARE (CF TABLE)       51.63004
DF=    9

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.6744
MEAN( 1)=       2.95991   SD( 1)=      0.99634
MEAN( 2)=       2.65839   SD( 2)=      0.61720
```

Table 3-178. Interviewer's Assessment of Difficulty in Acquisition of Information vs. Desired Volume of Transporting Medium

```
   Q62    IS CROSS TABULATED WITH      Q22     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5357

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        4        1
    1        4        1


 ( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q62
   3 *    47    262   226   336   873
   T*      1     5     4     6    16
   R*      5    30    26    39   100
   C*     13    16    20    15    16
   *
   2 *   184   784   615  1225  2808
   T*      3    15    11    23    52
   R*      7    28    22    44   100
   C*     49    48    53    56    52
   *
   1 *   142   579   313   642  1676
   T*      3    11     0    12    31
   R*      8    35    19    38   100
   C*     38    36    27    29    31
   *
   ************************************
 ( 1)      1           3
Q22              2           4

COLUMN   373         1154
TOTAL         1625        2205

PERCENT    6          21
TOTAL          30          41

GRAND TOTAL= 5357

CHI-SQUARE (OF TABLE)      47.46642I
DF=    6
```

(Question 62)
I.	(1)	Quite clear or obvious
II.	(2)	Fairly clear or obvious
III.	(3)	Neither clear nor obvious

(Question 22)
I.	(4)	All from recall
II.	(1)	One report or document
III.	(2)	A sampling of the reports and documents available
IV.	(3)	All the reports and documents that could be found pertinent to the question

```
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0496        o
MEAN( 1)=        2.96901   SD( 1)=       0.99634
MEAN( 2)=        1.85010   SD( 2)=       0.67338
```

Table 3-179. Desired Detail of Transporting Medium vs. Usefulness
of Title Listings or Abstracts

```
     25    IS CROSS TABULATED WITH      23    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2       3       1
     1       3       1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
 25
     3 *   963   375   634 1972          (Question 25)
     T*     18     7    12   37          I     (1)   A once over lightly
     R*     49    19    32  100          II.   (3)   A specified answer
     C*     31    36    51   37          III.  (2)   A detailed analysis
       *
     2 *  1835   578   530 2793          (Question 23)
     T*     35    11    10   56          I     (3)   Would not have been useful
     R*     6,    19    18  100          II.   (2)   Would have found them useful
     C*     62    55    43   56          III.  (1)   Used them for this chunk
       *
     1 *   216    95    82  393
     T*      4     2     2    7
     R*     55    24    21  100
     C*      7     9     7    7
       *
       ****************************** -
( 1)     1             3
 23                2

COLUMN   3064        1246
 TOTAL         1048

PERCENT    57          23
 TOTAL           20

GRAND TOTAL= 5358

CHI-SQUARE (OF TABLE)       154.29883
DF=   4
```

```
VALUES NOT ENTERED    1
  CASE NO.      VARIABLE  2     VARIABLE  1
   5307             2               1

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1290
MEAN( 1)=        1.66057   SD( 1)=       0.83028
MEAN( 2)=        2.29427   SD( 2)=       0.59626
```

Table 3-180. Usefulness of Title Listings or Abstracts vs.
Kind of Work Position

```
    023   IS CROSS TABULATED WITH      Q55    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2      3       1
   1      12      1


( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
023
   3 *   97   315  110  131  197   88  115   56   28   18   65   26 1266
  T*      2    6    2    2    4    2    2    1    1    0    1    0   23
  P*      8   25    9   11   16    7    9    4    2    1    5    2  100
  C*     44   35   21   25   19   17   23   13   12   11   29   28   23
  *
   2 *   76  176  118  117  240   83   92   75   50   29   27   14 1047
  T*      0    3    2    2    4    2    2    1    1    1    0    0   20
  P*      2   17   11   11   23    8    9    7    5    3    3    1  100
  C*     12   19   23   22   24   16   18   17   21   18   12   15   20
  *
   1 *   56  418  288  294  575  345  299  300  162  112  132   53 3063
  T*      2    8    5    5   11    6    6    6    3    2    2    1   57
  P*      3   14    9    9   19   11   10   1C    5    4    4    2  100
  C*     44   46   56   53   57   67   59   70   67   70   59   57   57
  *
  ***********************************************************************
  ( 1)     1        3        5        7        9       11
,055           2        4        6        8       10       12

COLUMN  210       516       1012      505       240      224
TOTAL         909       532       516      431      159       93

PERCENT    4        10        19        9        4        4
TOTAL         17        10        10        8        3        2

GRAND TOTAL=  5356

CHI-SQUARE (OF TABLE)        246.3536R
DF=  22


VALUES NOT ENTERED   3
  CASE NO.     VARIABLE  2    VARIABLE  1
    1273           2             0
    1283           1             0
    1293           1             0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =0.1349
MEAN( 1)=    5.25882   SD( 1)=    2.76111
MEAN( 2)=    1.66057   SD( 2)=    0.94028
```

(Question 23)
I   (3)   Would not have been useful
II.   (2)   Would have found them useful
III. (1)   Used them for this chunk

(Question 55)
I.   (02) Research - basic
II.   (01) Research - applied
III. (11) System analysis
IV.   (03) Development - advanced
V.   (04) Development - engineering
VI.   (05) Development - operational system
VII. (06) R&D support
VIII. (07) Test or evaluation
IX.   (08) Production processes
X.   (09) Production end-items
XI.   (10) Reliability or quality control
XII. (12) Customer relations

Table 3-181. Usefulness of Title Listings or Abstracts vs. Field of Work Position

```
C23    IS CROSS TABULATED WITH    Q56      OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      3      1
    1      9      1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q23
   3 •    115    47    56   254   302   175   189    70    34 1242
   T•       2     1     1     5     6     3     4     1     1   23
   R•       9     4     5    20    24    14    15     6     3  1C0
   C•      21    47    19    21    21    32    28    17    34   23
   •
   2 •    100    11    69   243   314   102   121    71    17 1048
   T•       2     0     1     5     6     2     2     ?     0   20
   R•      10     1     7    23    30    10    12     7     2  1C0
   C•      18    11    23    20    22    18    18    18    17   20
   •
   1 •    342    42   175   709   830   278   368   263    49 3056
   T•       6     1     3    13    16     5     7     9     1   57
   R•      11     1     6    23    27     9    12     9     2  1C0
   C•      61    42    58    59    57    5C    54    65    49   57
   •
  •••••••••••(•••••••••••••••••••••••••••••••••••••••••
( 1)        1         3         5         7         9
Q56              2         4         6         8

COLUMN    557       300        1446       678       100
TOTAL          100       1206       555       404

PERCENT    10         6        27        13         2
TOTAL           2        23        10         8

GRAND TOTAL= 5346

CHI-SQUARE (OF TABLE)        98.63969
DF=   16
```

(Question 23)
I.   (3)   Would not have been useful
II.   (2)   Would have found them useful
III.   (1)   Used them for this chunk

(Question 56)
I.   Production, Management and Social Sciences
      (32) Miscellaneous arts and sciences
      (23) Personnel and training
      (26) Production and management
      (28) Psychology and human engineering

II.   Medical Sciences
      (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
      (11) Ground transportation equipment
      (13) Installations and constructions
      (18) Military sciences and operations
      (24) Photography and other reproduction processes
      (29) Quartermaster equipment and supplies
      (31) Ships and marine equipment
      (33) Transportation

IV. Aeronautics and Space Technology
      (01) Aircr ft and flight equipment
      (12) Guided missiles
      (1») Navigation

V.   Electronics and Electrical Engineering
      (05) Communications
      (06) Detection
      (07) Electrical equipment
      (08) Electronics, electronic equipment

VI. Chemical Science and Materials
      (03) Chemical warfare equipment and materials
      (04) Chemistry
      (10) Fuels and combustion
      (14) Materials (nonmetallic)
      (17) Metallurgy
      (22) Ordnance

VII. Physical Science
      (02) Astronom_, geophysics and geography
      (09) Fluid mechanics
      (20) Nuclear physics and nuclear chemistry
      (21) Nuclear propulsion
      (25) Physics
      (27) Propulsion systems

VIII. Research and Research Equipment
      (30) Research and research equipment

IX. Mathematics
      (15) Mathematics

```
VALUES NOT ENTERED :3
 CASE NO.      VARIABLE  2      VARIABLE  1
    370            1               0
    439            1               0
    444            1               0
    449            1               0
    465            3               0
    472            1               0
    479            3               0
    710            1               0
    727            1               0
    736            1               0
    745            1               0
   1957            3               0
   1964            3               0

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0243
MEAN( 1)=      4.83654   SD( 1)=      1.97515
MEAN( 2)=      1.66057   SD( 2)=      0.83028
```

Table 3-182.   Desired Detail of Transporting Medium vs.
Actual Detail of Transporting Medium

```
    -Q25   IS CROSS TABULATED WITH      -Q24    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS- 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
       2       3       1
       1       3       1


  ( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)       (Question 25)
-Q25                                                        I.    (1)  A once over lightly
   3 *    308   111  1553 1972                               II.   (3)  A specified answer
   T*      6     2    29   37                                III.  (2)  A detailed analysis
   P*     16     6    79  100
   C*     32     4    72   37                                (Question 24)
     *                                                       I.    (1)  A once over lightly
   2 *    270  2591  132 2993                                II.   (3)  A specific answer
   T*      5    48    2   56                                 III.  (2)  A detailed analysis
   P*      9    87    4  100
   C*     28    96    8   56
     *
   1 *    374    7   12  393
   T*      7     0    0    7
   R*     95     2    3  100
   C*     39     0    1    7
     *
     ******************* **********
  ( 1)        1            3
-Q24                       2

COLUMN    952         1697
 TOTAL          2709

PERCENT    18          32
 TOTAL           51

GRAND TOTAL = 5358

CHI-SQUARE (OF TABLE)       5182.95069
DF=    4




VALUES NOT ENTERED    1
   CASE NO.     VARIABLE  2     VARIABLE  1
    5307           0              2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.6302
MEAN( 1)=        2.11502   SD( 1)=       0.68925
MEAN( 2)=        2.29427   SD( 2)=       0.59626
```

Table 3-183. Actual Layout of Transporting Medium vs.
Actual Detail of Transporting Medium

```
Q26     IS CROSS TABULATED WITH      Q24     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5295

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      17       1
    1       3       1
```

```
( 2)               (EXTREME RIGHT VALUE IS ROW TOTAL)
Q26
  17 *     P      4      5     17
   T*      0      0      0      0
   R*     47     24     29    100
   C*      1      0      0      0
     *
  16 *            3      1      4
   T*      0      0      0      0
   R*            75     25    100
   C*      0      0      0      0
     *
  15 *            3             3
   T*            0             0
   R*           100           100
   C*      0             0      0
     *
  14 *    118    280     67    465
   T*      2      5      1      9
   R*     25     60     14    100
   C*     13     13      4      9
     *
  13 *     54     60     81    195
   T*      1      1      2      4
   R*     28     31     42    100
   C*      6      2      5      4
     *
  12 *    117    160    189    466
   T*      2      3      4      9
   R*     25     34     41    100
   C*     12      6     11      9
```

(Question 26)		
I.	(14)	Recall
II.	(13)	Telephone conversation
III.	(11)	Group discussion
IV	(4)	Photographs
V.	(3)	Graphics (diagrams, drawings, etc.)
VI.	(2)	Tables or lists
VII.	(1)	Narrative text
VIII.	(18)	Narrative text and tables or lists
IX.	(9)	Graphics and lists
X.	(8)	Photographs and text
XI.	(7)	Graphics and text
XII.	(16)	Graphics, text and oral
XIII.	(17)	Graphics, text, oral, and recall
XIV.	(12)	Informal briefing, with chalk or pencil drawings
XV.	(5)	Microfilm - microfiche
XVI.	(6)	Slides or motion pictures
XVII.	(10)	Formal briefing or lecture

(Question 24)		
I.	(1)	A once over lightly
II.	(3)	A specific answer
III.	(2)	A detailed analysis

```
     *
  11 *    226    578    546   1400
   T*      4     11     11     26
   R*     16     41     43    100
   C*     24     22     36     26
     *
  10 *     15     26     10     51
   T*      0      0      0      1
   R*     29     51     20    100
   C*      2      1      1      1
     *
   9 *     14     61     63    138
   T*      0      1      1      3
   R*     10     44     46    100
   C*      1      2      4      3
     *
   8 *     12     24     22     58
   T*      0      0      0      1
   R*     21     41     38    100
   C*      1      1      1      1
     *
   7 *    146    319    235    700
   T*      3      6      4     13
   R*     21     46     34    100
   C*     16     12     14     13
     *
   6 *     53    271    108    432
   T*      1      5      2      8
   R*     12     63     25    100
   C*      6     10      6      8
     *
   5 *     34    257    122    413
   T*      1      5      2      8
   R*      8     62     30    100
   C*      4     10      7      8
     *
   4 *      2      6             8
   T*      0      0             0
   R*     25     75            100
   C*      0      0             0
     *
```

```
   *
   3 *     46    105     36    187
   T*      1      2      1      4
   R*     25     56     19    100
   C*      5      4      2      4
     *
   2 *     21     94      9    124
   T*      0      2      0      2
   R*     17     76      7    100
   C*      2      4      1      2
     *
   1 *     71    432    131    634
   T*      1      8      2     12
   R*     11     68     21    100
   C*      8     16      8     12

     ***************************
   ( 1)     1             3
Q24                  2

COLUMN     937           1675
 TOTAL          2683

PERCENT     17             31
 TOTAL          50

GRAND TOTAL=  5295

CHI-SQUARE (OF TABLE)         408.56528
DF=   32

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.020^
MEAN( 1)=           2.13938    SD( 1)=        0.68845
MEAN( 2)=           8.24486    SD( 2)=        4.12179
```

Table 3-184.   Desired Layout of Transporting Medium vs. Actual Detail of Transporting Medium

```
     -Q27   IS CROSS TABULATED WITH    -Q24    OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      17      1
    1       3      1

( 2)                 (EXTREME RIGHT VALUE IS ROW TOTAL)
-Q27
  17 •      9     11     11    31          (Question 27)
   T•      r      0      0     1          I.    (14)  Recall
   R•     29     35     35   100          II.   (13)  Telephone conversation
   C•      1      0      1     1          III.  (11)  Group discussion
    •                                     IV.   (4)   Photographs
  16 •      3      3      4    10          V.    (3)   Graphics (maps, graphs, etc.)
   T•      0      0      0     0          VI.   (2)   Tables or lists
   R•     30     30     40   100          VII.  (1)   Narrative text
   C•      0      0      0     0          VIII. (16)  Narrative text and tables or lists
    •                                     IX.   (9)   Graphics and lists
  15 •      3      4      3    10          X.    (8)   Photographs and text
   T•      r      0      0     0          XI.   (7)   Graphics and text
   R•     30     40     30   100          XII.  (16)  Graphics, text and oral
   C•      0      0      0     0          XIII. (17)  Graphics, text, oral, and recall
    •                                     XIV.  (12)  Informal briefing, with chalk or pencil drawings
  14 •     67    210     64   341          XV.   (5)   Microfilm - microfiche
   T•      1      4      1     6          XVI.  (6)   Slides or motion pictures
   R•     20     62     19   100          XVII. (10)  Formal briefing or lecture
   C•      7      8      4     6
    •                                     (Question 24)
  13 •     31     39     60   130          I.    (1)   A once over lightly
   T•      1      1      1     2          II.   (3)   A specific answer
   R•     24     30     46   100          III.  (2)   A detailed Analysis
   C•      3      1      4     2
    •
  12 •     95    139    159   393           •
   T•      2      3      3     7          I •     60   +16    127   603
   R•     24     35     40   100          T•      1     8     2    11
   C•     10      5      9     7          R•     10    69    21   100
    •                                     C•      6    15     8    11
  11 •    308    682    643  1633           •
   T•      6     13     12    31          ••••••••••••••••••••••••••••••••••
   R•     19     42     39   100
   C•     32     25     38    31          ( 1)        1           3
    •                                     -Q24              2
  10 •     23     34     12    69
   T•      0      1      0     1          COLUMN     948         1690
   R•     33     49     17   100          TOTAL           2696
   C•      2      1      1     1
    •                                     PERCENT     18          32
   9 •     19     62     67   148          TOTAL           51
   T•      0      1      1     3
   R•     13     42     45   100          GRAND TOTAL= 5334
   C•      2      2      •     3
    •                                     CHI-SQUARE (OF TABLE)      367.55649
   8 •     15     25     19    59          DF=  32
   T•      c      0      0     1
   R•     25     42     32   100          VALUES NOT ENTERED  25
   C•      2      1      4     1            CASE NO.    VARIABLE  2    VARIABLE  1
    •                                         81          0            2
   7 •    168    341    225   734             90          0            2
   T•      3      6      4    14            339          0            3
   R•     23     46     31   100            790          0            3
   C•     18     13     13    14           1303          0            1
    •                                       1753          0            2
   6 •     60    292    125   477           2339          0            1
   T•      1      5      2     9           2628          0            3
   R•     13     61     26   100           2641          0            3
   C•      6     11      7     9           3176          0            1
    •                                       3192          0            2
   5 •     52    283    131   466           3248          0            1
   T•      1      4      2     9           3253          0            2
   R•     11     61     28   100           3547          0            3
   C•      5     10      8     9           3700          0            2
    •                                       3998          0            2
   4 •      1     10          11           4173          0            2
   T•      0      0           0            4366          0            2
   R•      9     91         100            4420          0            1
   C•      0      0           0            4582          0            2
    •                                       4690          0            2
   3 •     29     78     32   139           4734          0            2
   T•      1      1      1     3           5121          0            2
   R•     21     56     23   100           5241          0            2
   C•      3      1      2     1           5273          0            3
    •
   2 •      5     67      8    80          (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
   T•      0      1      0     1          EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).
   R•      6     84     10   100
   C•      1      2      0     1          CORRELATION COEFFICIENT  0.0227
                                          MEAN( 1)=      2.13902   SD( 1)=      0.68925
                                          MEAN( 2)=      6.21571   SD( 2)=      3.97924
```

Table 3-185. Class of Information vs. Actual Detail
of Transporting Medium

```
G28     IS CROSS TABULATED WITH     324     R.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2      14      1
     1       3      1
```

(Question 28)
II.	(1)	Concepts
III.	(9)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
X.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding; administrative action

(Question 24)
I.	(1)	A once over lightly
II.	(3)	A specific answer
III.	(2)	A detailed analysis

```
( 2)                 (FEATURE: RIGHT VALUE IS ROW TOTAL)
028
   14 *      30     93    37   160
    T*       1      2     1     3
    R*      19     58    23   100
    C*       3      3     2     3
     *
   13 *      46     93    50   189
    T*       1      2     1     4
    R*      24     49    26   100
    C*       5      3     3     4
     *
   12 *      77    137   114   379
    T*       1      3     2     6
    R*      23     42    35   100
    C*       8      5     7     6
     *
   11 *      30    137    57   224
    T*       1      3     1     4
    R*      13     61    25   100
    C*       3      5     3     4
     *
   10 *     254    663   432  1349
    T*       5     17     4    25
    R*      19     45    32   100
    C*      27     24    25    25
     *
    9 *     172    447   244   813
    T*       2      8     5    15
    R*      15     55    30   100
    C*      13     17    14    15

    8 *      35     86    68   189
    T*       1      2     1     4
    R*      19     46    36   100
    C*       4      3     4     4
     *
    7 *      30    141    64   235
    T*       1      3     1     4
    R*      13     60    27   100
    C*       3      5     4     4
     *
    6 *      40     82    65   187
    T*       1      2     1     3
    R*      21     44    35   100
    C*       4      3     4     3
     *
    5 *      85    302   160   547
    T*       2      6     3    10
    R*      16     55    29   100
    C*       9     11     9    10
     *
    4 *      50    197   160   387
    T*       1      4     3     7
    R*      13     51    36   100
    C*       5      7     9     7
     *
    3 *      67    203   107   372
    T*       1      4     2     7
    R*      17     55    29   100
    C*       7      7     6     7
     *
    2 *      91    128   159   378
    T*       2      2     3     7
    R*      24     34    42   100
    C*      10      5     9     7

***************************
( 1)        1            3
024                2

COLUMN     952         1697
 TOTAL          2709

PERCENT    18           12
 TOTAL          51
```

```
GRAND TOTAL=  5358

CHI-SQUARE (OF TABLE)        114.55514
DF=   24

VALUES NOT ENTERED   1
   CASE NO.    VARIABLE  2     VARIABLE  1
    4427            0              2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  -0.0374
 MEAN(  1)=      2.13902    SD(  1)=      0.68925
 MEAN(  2)=      7.90035    SD(  2)=      3.31766
```

Table 3-186. Field of Information vs. Actual Detail of Transporting Medium

```
      C29     IS CROSS TABULATED WITH      C24     OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
         2      9       1
         1      3       1


( 2)                   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q29
        9 •     23    83    63   169
        T•       0     2     1     3
        R•      14    49    37   100
        C•       2     3     4     3
          •
        8 •     64   254   130   448
        T•       1     5     2     8
        R•      14    57    29   100
        C•       7     9     8     8
          •
        7 •    140   344   263   747
        T•       3     6     5    14
        R•      19    46    35   100
        C•      15    13    16    14
          •
        6 •    130   357   225   712
        T•       2     7     4    13
        R•      18    50    32   100
        C•      14    13    13    13
          •
        5 •    233   649   409  1291
        T•       4    12     8    24
        R•      18    50    32   100
        C•      25    24    24    24
          •
        4 •    172   467   261   900
        T•       3     9     5    17
        R•      19    52    29   100
        C•      18    17    15    17



        3 •     54   198   103   355
        T•       1     4     2     7
        R•      15    56    29   100
        C•       6     7     6     7
          •
        2 •     15    42    38    95
        T•       0     1     1     2
        R•      16    44    40   100
        C•       2     2     2     2
          •
        1 •    117   302   157   617
        T•       2     6     4    12
        R•      19    49    32   100
        C•      12    11    12    12
          •
        •••••••••••••••••••••••••
       ( 1)     1           3
Q24                   2

COLUMN   948       1690
TOTAL          2696

PERCENT   18        32
TOTAL          51

GRAND TOTAL= 5334

CHI-SQUARE (OF TABLE)        28.48897
DF=  16

VALUES NOT ENTERED  25
  CASE NO.      VARIABLE  2      VARIABLE  1
     420            0                1
     465            0                1
     467            0                2
     472            0                2
     716            0                3
     995            0                2
    1295            0                1
    1880            0                3
    1895            0                2
    2582            0                3
```

(Question 29)
I.   Production, Management and Social Sciences
    (32)   Miscellaneous arts and sciences
    (23)   Personnel and training
    (26)   Production and management
    (28)   Psychology and human engineering

II.   Medical Sciences
    (16)   Medical sciences

III.   Mechanical Industrial, Civil and Marine Engineering
    (11)   Ground transportation equipment
    (13)   Installations and constructions
    (18)   Military sciences and operations
    (24)   Photography and other reproduction processes
    (29)   Quartermaster equipment and supplies
    (31)   Ships and marine equipment
    (33)   Transportation

IV.   Aeronautics and Space Technology
    (01)   Aircraft and flight equipment
    (12)   Guided missiles
    (19)   Navigation

V.   Electronics and Electrical Engineering
    (05)   Communications
    (06)   Detection
    (07)   Electrical equipment
    (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
    (03)   Chemical warfare equipment and materials
    (04)   Chemistry
    (10)   Fuels and combustion
    (14)   Materials (nonmetallic)
    (17)   Metallurgy
    (22)   Ordnance

VII.   Physical Science
    (02)   Astronomy, geophysics and geography
    (09)   Fluid mechanics
    (20)   Nuclear physics and nuclear chemistry
    (21)   Nuclear propulsion
    (25)   Physics
    (27)   Propulsion systems

VIII.   Research and Research Equipment
    (30)   Research and research equipment

IX.   Mathematics
    (15)   Mathematics

(Question 24)
I.   (1)   A once over lightly
II.   (3)   A specific answer
III.   (2)   A detailed analysis

```
      2587          0          3
      2592          0          2
      2787          0          2
      2813          0          2
      2836          0          3
      2871          0          3
      2956          0          2
      3207          0          1
      3209          0          2
      3214          0          2
      3406          0          2
      3532          0          2
      4186          0          3
      4600          0          2
      5281          0          2
```

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

```
CORRELATION COEFFICIENT  0.0179
MEAN( 1)=      2.13902   SD( 1)=      0.68925
MEAN( 2)=      4.95111   SD( 2)=      2.12062
```

Table 3-187. Essentiality of Information to Task vs.
Actual Detail of Transporting Medium

```
   Q30     S CROSS TABULATED WITH     Q24     OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        4       1
    1        3       1
```

```
( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q30
   4 •    596  2187  1404  4187
   T•      11    41    26    78
   R•      14    52    34   100
   C•      63    81    83    78
     •
   3 •    239   433   238   910
   T•       4     8     4    17
   R•      26    48    26   100
   C•      25    16    14    17
     •
   2 •    103    78    54   235
   T•       2     1     1     4
   R•      44    33    23   100
   C•      11     3     3     4
     •
   1 •     14    12     1    27
   T•       0     0     0     1
   R•      52    44     4   100
   C•       1     0     0     1
     •
        •••••••••••••••••••••••••••••
( 1)      1           3
Q24             2

COLUMN    952        1697
_TOTAL_         2710

PERCENT    17          31
_TOTAL_          50
```

(Question 30)
I.   (4)   Neither essential nor helpful to successful task completion
II.   (3)   Not essential, but somewhat helpful to successful task completion
III.   (2)   Not essential, but extremely helpful to successful task completion
IV.   (1)   Absolutely essential to successful task completion

(Question 24)
I.   (1)   A once over lightly
II.   (3)   A specific answer
III.   (2)   A detailed analysis

```
GRAND TOTAL= 5359

CHI-SQUARE (OF TABLE)     217.64441
DF=  6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.1642
MEAN(  1)=     2.13902   SD(  1)=     0.68925
MEAN(  2)=     3.72737   SD(  2)=     0.56240
```

Table 3-188.   Extensiveness of Information Use in Task vs.
Actual Detail of Transporting Medium

```
_____Q31___ IS CROSS TABULATED WITH_____Q24____9R,_ . _   .. .. .-.-- ____ _

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)  . __ _____.   . . ___  :
     2      6      1
     1      3      1

( 2)                    (EXTREME RIGHT VALUE IS ROW TOTAL)
Q31
    6 •    311  1115   772 2198
    T•       6 _  21    14    41
    R•      14    51    35   10C
    C•      33    41    45    41
      •
    5 •    248   970   618 1836
    T•       5    18    12    34
    R•      14    53    34   100
    C•      26    36    36    34
      •
    4 •    117   346   160   623
    T•       2     6     3    12
    R•      19    56    26   100
    C•      12    13     9    12
      •
    3 •    235   241   141   617
    T•       4     4     3    12
    R•      38    39    23   10C
    C•      25     9     8    12
      •
    2 •     16    26     5    47
    T•       0     0     0     1
    R•      34    55    11   100
    C•       2     1     C     1
      •
    1 •     25    12     1    38
    T•       0     0     0     1
    R•      6,    32     3   100
    C•       :    C      C     1
```

(Question 31)
I.   (6)   Not at all
II.   (5)   As a lead to other information
III.   (4)   As background information
IV.   (3)   In only small parts of the task
V.   (2)   In major portions of the task
VI.   (1)   Throughout the entire duration of the task

(Question 24)
I.   (1)   A once over lightly
II   (3)   A specific answer
III.   (2)   A detailed analysis

```
    ..  •
    ••••••••••••••••••••••••••
    ( 1)        1         3
    Q24                   2

    COLUMN   952      1697
    _TOTAL         2710

    PERCENT    17        31
     TOTAL           50

    GRAND TOTAL=  5359

    CHI-SQUARE (OF TABLE)      3C8.51253
    DF=  10

    (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
    EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

    CORRELATION COEFFICIENT  0.1C16
    MEAN( 1)=       2 )3902   SD( 1)=       0.68925
    MEAN( 2)=       5.uC896   SD( 2)=       1.08603
```

Table 3-189. Desired Layout of Transporting Medium vs. Desired Detail of Transporting Medium

```
Q27    IS CROSS TABULATED WITH     625    ON.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5334

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2       17      1
    1        3      1
```

(2) Q27			(EXTREME RIGHT VALUE IS ROW TOTAL)
17 •	5	16	10	31
T•	0	0	0	1
R•	16	52	32	100
C•	1	1	1	1
16 •		6	4	10
T•		0	0	0
R•		60	40	100
C•		0	0	0
15 •	2	4	4	10
T•	0	0	0	0
R•	20	40	40	100
C•	1	0	0	0
14 •	44	227	70	341
T•	1	4	1	6
R•	13	67	21	100
C•	11	8	4	6
13 •	20	45	65	130
T•	0	1	1	2
R•	15	35	50	100
C•	5	2	3	2
12 •	38	162	193	393
T•	1	3	4	7
R•	10	41	49	100
C•	10	5	10	7

(Question 27)

I.	(14)	Recall
II.	(13)	Telephone conversation
III.	(11)	Group discussion
IV	(4)	Photographs
V.	(3)	Graphics (maps, graphs, etc.)
VI.	(2)	Tables or lists
VII.	(1)	Narrative text
VIII.	(15)	Narrative text and tables or lists
IX.	(9)	Graphics and lists
X.	(8)	Photographs and text
XI.	(7)	Graphics and text
XII.	(16)	Graphics, text and oral
XIII.	(17)	Graphics, text, oral, and recall
XIV.	(12)	Informal briefing, with chalk or pencil drawings
XV.	(5)	Microfilm – microfiche
XVI.	(6)	Slides or motion pictures
XVII.	(10)	Formal briefing or lecture

(Question 25)

I.	(1)	A once over lightly
II.	(3)	A specified answer
III.	(2)	A detailed analysis

3 •	14	88	37	139
T•	0	2	1	3
R•	10	63	27	100
C•	4	3	2	3
11 •	53	780	760	1633
T•	2	15	14	31
R•	6	48	47	100
C•	24	26	39	31
2 •	4	66	10	80
T•	0	1	0	1
R•	5	83	13	100
C•	1	2	1	1
10 •	6	44	19	69
T•	0	1	0	1
R•	9	64	28	100
C•	2	1	1	1
1 •	46	427	130	603
T•	1	8	2	11
R•	8	71	22	100
C•	12	14	7	11
9 •	8	68	72	148
T•	0	1	1	3
R•	5	46	49	100
C•	2	2	4	3

```
•••••••••••••••••••••••••••••••
( 1)        1        2        3
Q25

COLUMN     390           1963
TOTAL            2981

PERCENT      7            36
TOTAL            55

GRAND TOTAL= 5334

CHI-SQUARE (OF TABLE)        336.58286
DF=   32

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
 EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0959
MEAN(  1)=       2.29490    SD(  1)=       0.59517
MEAN(  2)=       8.25422    SD(  2)=       3.94951
```

8 •	4	32	23	59
T•	0	1	0	1
R•	7	54	39	100
C•	1	1	1	1
7 •	65	391	278	734
T•	1	7	5	14
R•	9	53	38	100
C•	17	13	14	14
6 •	23	320	134	477
T•	0	6	2	6
R•	5	67	28	100
C•	6	11	7	9
5 •	17	295	154	466
T•	0	6	3	9
R•	4	63	33	100
C•	4	10	8	9
4 •	1	10		11
T•	0	0		0
R•	9	91		100
C•	0	0		0

Table 3-190. Disvoery of Information Available, but Unknown, during
Task vs. Desired Detail of Transporting Medium

```
        O32    IS CROSS TABULATED WITH     025    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
     2        2        1
     1        3        1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q32
   2 •    103   565   427 1092          (Question 32)
    T•      2    11     8   20          I.    (2)   No
    R•      9    52    39  100          II.   (1)   Yes
    C•     25    19    22   20
    •                                   (Question 25)
   1 •    293  2429  1545 4267          I.    (1)   A once over lightly
    T•      5    21     4   80          II.   (3)   A specified answer
    R•      7    26     5  100          III.  (2)   A detailed analysis
    C•     75    37    12   P0
    •
        ••••••••••••••••••••••••••••
 ( 1)     1            3
 025                2

COLUMN   393        1972
 TOTAL         2994

PERCENT    7         36
  TOTAL         55

GRAND TOTAL= 5359

CHI-SQUARE (OF TABLE)      12.38635
DF=   2

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0041




MEAN( 1)=      2.29444  SD( 1)=     0.59545
MEAN( 2)=      1.20377  SD( 2)=     0.40284
```

Table 3-191. Interviewer's Assessment of Difficulty in Use of Information
vs. Desired Detail of Transporting Medium

```
------ Q61    IS CROSS TABULATED WITH      Q25      OR.

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
     2       5       1
     1       3       1


( 2)              (EXTREME RIGHT VALUE IS ROW TOTAL)
Q61
   4 *    28   178   178   384
   T*     1     3     3     7
   R*     7    46    46   100
   C*     7     6     9     7
   *
   3 *   246  2014  1302  3562
   T*     5    38    24    66
   P*     7    57    37   100
   C*    63    67    66    66
   *
   2 *    46   339   225   610
   T*     1     6     4    11
   Q*     8    56    37   100
   C*    12    11    11    11
   *
   1 *    73   463   267   803
   T*     1     9     5    15
   R*     9    58    33   100
   C*    19    15    14    15
   *
   **********************************
 ( 1)     1           3
Q25             2

CCLUMN   393   1972
TOTAL          2994

PERCENT    7     36
TOTAL          55
```

(Question 61)
I.   (1) Obvious or prescribed
II.   (2) Entirely or largely independent of professional judgment
III. (3) Entirely or largely dependent upon professional judgment
IV.   (4) Difficult, because methods and procedures were lacking

(Question 25)
I.   (1) A once over lightly
II.   (2) A specified answer
III. (3) A detailed analysis

```
GRAND TOTAL= 5359

CHI-SQUARE (CF TABLE)      23.62161
DF=    6

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0471
MEAN( 1)=      2.29464    SD( 1)=      0.59945
MEAN( 2)=      2.65815    SD( 2)=      0.81738
```

Table 3-192. Interviewer's Assessment of Difficulty in Acquisition of
Information vs. Desired Detail of Transporting Medium

```
     Q62    IS CROSS TABULATED WITH      Q25    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2       4       1
    1       3       1


( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q62
    3 •    67    422   385   874                    (Question 62)
    T•      1      8     7    16        I.    (1)   Quite clear or obvious
    P•      8     48    44   100        II.   (2)   Fairly clear or obvious
    C•     17     14    20    16        III.  (3)   Neither clear nor obvious
      •
    2 •   184   1571  1054  7609                    (Question 25)
    T•      3     29    20    52        I.    (1)   A once over lightly
    R•      7     56    38   100        II.   (3)   A specified answer
    C•     47     52    53    52        III.  (2)   A detail 4 analysis
      •
    1 •   142   1001   533  1676
    T•      3     15    10    31
    R•      8     60    32   100
    C•     36     33    27    31
      •
      ••••••••••••••••••••••••••••
( 1)      1            3
Q25              2

COLUMN   393        1972
 TOTAL        2994

PERCENT    7          36
 TOTAL        55

GRAND TOTAL= 5359

CHI-SQUARE (OF TABLE)       43.17177
DF=    4
```

```
(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0760
MEAN( 1)=      2.29464   SD( 1)=     0.59545
MEAN( 2)=      1.85035   SD( 2)=     0.67344
```

Table 3-193. Desired Layout of Transporting Medium vs.
Actual Layout of Transporting Medium

Q27   IS CROSS TABULATED WITH   Q26   OR,

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 52d7

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2   17   1
   1   17   1

(2)
Q27   (EXTREME RIGHT VALUE IS ROW TOTAL)
17 *   2   1   1   2   1   1   6   2   15   31
T*   0   0   0   0   0   0   0   0   0   1
R*   6   3   3   6   3   3   19   6   48 100
C*   1   0   0   0   2   0   1   0   88   1
  *
16 *   2   1   1   1   2   3   10
T*   0   0   0   0   0   0   0
R*   20   10   10   10   20   30   100
C*   0   0   1   2   0   100   0
  *
15 *   3   1   2   6
T*   0   0   0   0
R*   50   17   33   100
C*   0   0   67   0
  *
14 *   2   4   1   7   1   3   7   2   313   340
T*   0   0   0   0   0   0   0   0   6   6
R*   1   1   0   2   0   1   2   1   92   100
C*   0   3   1   1   2   0   2   1   67   6
  *
13 *   1   2   6   115   124
T*   0   0   0   7   2
R*   1   2   5   93   100
C*   0   0   1   60   2
  *
12 *   3   1   1   9   1   4   11 322   22   9   383
T*   0   0   0   0   0   0   0   6   0   0   7
R*   1   0   0   2   0   1   3   84   6   2   100
C*   2   0   0   1   2   3   1   69   11   2   7
  *
11 *   15   19   16   1   15   13   41   2   3 1354   52   24   65   1 1624
T*   0   0   0   0   0   0   1   0   0   1   1   0   1   0   31
R*   1   1   1   0   1   1   3   0   0   3   1   1   4   0 100
C*   3   15   4   13   4   3   6   0   6   3   11   12   14   6   31
  *
10 *   2   2   3   3   46   3   7   2   69
T*   0   0   0   0   1   0   0   0   1
R*   4   3   4   4   67   4   19   3   100
C*   0   2   2   0   90   0   2   0   1
  *
9 *   3   6   1   126   2   3   5   2   148
T*   0   0   0   7   0   0   0   0   3
P*   2   4   1   95   1   2   3   1   100
C*   1   1   0   91   0   1   3   0   3
  *
8 *   48   5   1   2   56
T*   1   0   0   0   1
9*   86   5   2   4   100
C*   84   1   1   0   1
  *
7 *   12   14   27   1   9 602   1   3   14   5   35   727
T*   0   0   1   0   0   11   0   0   0   0   1   14
R*   2   4   4   0   1   83   0   0   2   1   5   100
C*   2   11   14   0   2   86   2   0   4   2   8   14
  *
6 *   6   3   6   2 347   17   6   3   11   13   7   11   1   473
T*   0   0   0   0   7   0   0   0   0   0   0   9   0   9
R*   1   1   1   0   82   4   1   0   2   3   1   2   0   100
C*   1   2   3   0   90   2   11   2   1   3   4   2   33   9
  *
5 *   4   4   3   385   12   11   2   3   19   4   18   465
T*   0   0   0   7   0   0   1   0   0   0   0   9
R*   1   1   1   83   3   2   0   1   4   1   4   100
C*   1   3   2   93   1   2   1   0   4   2   4   9
  *
4 *   7   3   10
T*   0   0   0
P*   70   30   100
C*   PA   1   0

Table 3-193.   (Continued)

```
 3 •    1    1   126        1    3              4    1         2              139
 T•    0    0    2         0    0              0    0         6                3
 R•    1    1   91         1    2              3    1         1              100
 C•    0    1   67         0    0              0    0         C                3
 •
 2 •        77                                 2         1                     40
 T•         1                                  0         0                      2
 R•        96                                  3         1                    100
 C•        63                                  0         0                      2
 •
 1 •  5e5                   1    4             3    8              1  602
 T•   11                   0    0             0    0              0   11
 R•   9/                   0    1             0    1              0  100
 C•   92                   0    1             1    4              6   11
 •
```

```
( 1)    1      3      5      7      9     11     13     15    17
026          2      4      6      8     10     12     14     16
```

```
COLUMN  633    187    413    70J    13F    1400    193    3    17
TOTAL        12+      8     432     57     51     465    464    3
```

```
PERCENT  11     3     0     13     1     2     26     3     0    0
TOTAL         2           7     A           0          8     8     0
```

GRAND TOTAL= 5287

CHI-SQUARE (OF TABLE)   50873.38916
DF= 256

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT C.8649
MEAN(1)=   8.24740   SD(1)=   4.11930
MEAN(2)=   8.23719   SD(2)=   3.94995

(Question 27)
I.   (14) Recall
II.   (13) Telephone conversation
III   (11) Group discussion
IV   (4)   Photographs
V.   (3)   Graphics (maps, graphs, etc)
VI.   (2)   Tables or lists
VII.   (1)   Narrative text
VIII. (18) Narrative text and tables or lists
IX   (9)   Graphics and lists
X.   (8)   Photographs and text
XI   (7)   Graphics and text
XII.   (16) Graphics text and oral
XIII. (17) Graphics, text, oral, and recall
XIV.   (12) Informal briefing, with chalk or pencil drawings
XV.   (5)   Microfilm - microfiche
XVI.   (6)   Slides or motion pictures
XVII. (10) Formal briefing or lecture

(Question 26)
I   (14) Recall
II   (13) Telephone conversation
III.   (11) Group discussion
IV   (4)   Photographs
V   (3)   Graphics (diagrams, drawings, etc.)
VI.   (2)   Tables or lists
VII.   (1)   Narrative text
VIII   (18) Narrative text and tables or lists
IX   (9)   Graphics and lists
X   (8)   Photographs and text
XI   (7)   Graphics and text
XII.   (16) Graphics, text and oral
XIII   (17) Graphics, text, oral, and recall
XIV   (12) Informal briefing, with chalk or pencil drawings
XV   (5)   Microfilm - microfiche
XVI   (6)   Slides or motion pictures
XVII   (10) Formal briefing or lecture

Table 3-194. Class of Information vs. Actual Layout of Transporting Medium

```
     Q28    IS CROSS TABULATED WITH    Q26    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      14       1
    1      17       1
```

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q28

14 •	9	8	7		7	29	26	4	4	2	21	13	1	25			1	140
T•	C	0	0		0	1	1	0	0	0	0	0	0	0			0	3
R•	6	5	6		4	18	17	2	2	1	13	8	1	16			1	100
C•	1	6	5		7	7	4	7	3	4	1	3	1	5			6	3
13 •	42	11	7		6	8	15	2	2	3	27	26	9	27			2	187
T•	1	0	0		0	0	0	0	0	0	1	0	0	1			0	4
R•	22	6	4		3	4	8	1	1	2	14	14	5	14			1	100
C•	7	9	4		1	2	2	3	1	6	2	6	5	6			12	4
12 •	22	12	10		9	12	66	3	7	3	100	33	17	31				325
T•	0	0	0		0	0	1	0	0	0	2	1	0	1				6
R•	7	4	3		3	4	20	1	2	1	31	10	5	10				100
C•	3	10	5		2	3	9	5	5	6	7	7	9	7				6
11 •	42	12	14		7	12	29	8	3	7	75	22	10	34			2	222
T•	1	0	0		0	0	1	0	0	0	0	0	0	1			0	4
R•	19	5	6		3	5	13	4	1	1	11	10	5	15			1	100
C•	7	10	7		2	3	4	14	2	4	7	5	5	7			12	4
10 •	137	21	37	5	81	100	100	7	43	20	445	156	50	117			5	1330
T•	3	0	1	0	2	2	2	0	1	0	8	3	1	2			0	25
R•	10	2	3	0	7	8	8	1	3	2	33	12	4	9			0	100
C•	22	17	20	63	21	23	14	12	31	39	32	33	26	25			29	25
9 •	25	23	23		64	74	170	18	32	9	235	56	70	55	1	1	1	807
T•	0	0	0		1	1	3	0	1	0	4	1	0	1	0	0	0	15
R•	3	3	3		8	9	21	2	4	1	29	7	7	7	0	0	0	100
C•	4	19	12		15	17	24	31	23	18	17	12	10	12	33	25	6	15
8 •	37	5	11		6	8	28		3	2	42	17	13	15		1		185
T•	1	0	0		0	0	1		0	0	1	0	0	0		0		3
R•	20	3	6		3	4	15		2	1	23	9	5	8		1		100
C•	6	4	6		1	2	4		7	4	3	4	5	3		25		3
7 •	54	6	11	1	12	17	22	3	3	1	47	20	11	19			3	230
T•	1	0	0	0	0	0	0	0	0	0	1	0	0	0			3	4
R•	23	3	5	0	5	7	10	1	1	0	20	9	5	8			1	100
C•	9	5	6	13	3	4	3	5	2	2	3	4	6	4			18	4
6 •	34	7	7		3	5	29	4	4	1	51	12	13	17				182
T•	1	0	0		0	0	1	0	0	0	1	0	0	0				3
R•	19	1	4		2	3	16	2	2	1	28	7	7	9				100
C•	5	2	4		1	1	4	7	3	2	4	3	7	4				3
5 •	71	7	17		149	19	43	1	2	4	139	27	15	42	1		1	545
T•	1	0	0		3	0	1	0	0	0	3	1	0	1	0		0	10
R•	13	1	3		27	3	8	0	2	1	26	5	3	3	0		0	100
C•	11	6	9		36	4	6	2	4	8	10	6	8	9	33		6	10
4 •	79	1	7		11	46	69	2	7		99	21	15	24			1	382
T•	1	0	0		0	1	1	0	0		2	0	0	0			0	7
R•	21	0	2		3	12	18	1	2		26	5	4	6			0	100
C•	12	1	4		3	11	10	3	5		7	5	8	5			6	7
3 •	9	10	11	1	39	94	24	4	20	1	67	37	10	25	1	1		364
T•	0	0	0	0	1	2	1	0	0	0	1	1	0	0	0	0		7
R•	2	3	3	0	11	26	7	1	5	0	18	10	3	7	0	0		100
C•	1	8	6	13	9	22	5	7	14	2	5	8	5	5	33	25		7
2 •	73	6	23	1	13	8	67	2	1	3	102	26	14	34		1	1	375
T•	1	0	0	0	0	0	1	0	0	0	2	0	0	1		0	0	7
R•	19	2	6	0	3	2	18	1	0	1	27	7	4	9		0	0	100
C•	12	5	12	13	3	2	10	3	1	6	7	6	7	7		25	6	7

```
•••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)      1         3         5         7         9        11        13       15       17
Q26            2         4         6         8        10        12        14       16

COLUMN   634       187       413       699       139      1403      195        3       17
TOTAL         124         8         432        58        51        466       464        4

PERCENT   12        4         8         13        3         26        4         0        0
TOTAL          2         0          8         1         1          9         9        0
```

Table 3-194.   (Continued)

GRAND TOTAL= 5294

CHI-SQUARE (OF TABLE)   1266.05961
DF= 152

VALUES NOT ENTERED 65

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT 0.0803
MEAN(1)=   8.15133   SD(1)=   4.19398
MEAN(2)=   7.90035   SD(2)=   5.31766

(Question 28)
II.   (1)   Concepts
III.   (8)   Raw data
IV.   (5)   Math aids and formulas; computer programs
V.   (3)   Designs or design techniques
VI.   (4)   Experimental processes and procedures
VII.   (11) Test processes and procedures
VIII.   (13) Evaluation
IX.   (9)   Specifications
X.   (6)   Performance and characteristics
XI   (7)   Production processes and procedures
XII.   (10) Technical status
XIII.   (12) Utilization
XIV.   (2)   Cost and funding; administrative action

(Question 26)
I   (14) Recall
II   (13) Telephone conversation
III.   (11) Group discussion
IV.   (4)   Photographs
V   (3)   Graphics (diagrams, drawings, etc.)
VI.   (2)   Tables or lists
VII.   (1)   Narrative text
VIII.   (15) Narrative text and tables or lists
IX   (9)   Graphics and lists
X   (8)   Photographs and text
XI.   (7)   Graphics and text
XII.   (16) Graphics, text and oral
XIII.   (17) Graphics, text, oral, and recall
XIV.   (12) Informal briefing, with chalk or pencil drawings
XV.   (5)   Microfilm - microfiche
XVI   (6)   Slides or motion pictures
XVII.   (10) Formal briefing or lecture

Table 3-195. Field of Information vs. Actual Layout of Transporting Medium

C29   IS CROSS TABULATED WITH   C26   **.

VARIABLE 2 IS CROSS TABULATED WITH VARIABLE 1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
```
   2      9      1
   1     17      1
```

(2)   (EXTREME RIGHT VALUE IS ROW TOTAL)
Q2+

```
 9 •    39    1    3         4   19   30    2    1         42   12    3   41                           167
   T•    1    0    0         0    0    1    0    0          1    0    C    0                             3
   R•   23    1    2         2   11   10    1    1         25    7    2    7                           100
   C•    6    1    2         1    4    4    4    1          3    3    2    2                             3
 •
 8 •    73    7   28        14   34   67    4    4         79   43   31   49                         3 340
   T•    1    0    0         0    1    1    0    C    0      3    2    3    1                         0    8
   R•   17    2    5         3    9   15    3    2    1    18   16    7   11                         1  100
   C•   12    6   11         3    9   10    7    6    1     6    9   16   11                        10    0
 •
 7 •   48   20   26    1    59   50   95    1   25    3  233   56   32   42    3    1              2  795
   T•    1    0    0    0     1    1    2    0    0    0     4    1    1    1    C    0              C   14
   R•    9    3    4    0     8    7   13    0    3    0    32    8    4    0    6    6              0  100
   C•   11   16   14   13    14   12   14    2   10    6    17   12   17   13   33   29             12   14
 •
 6 •   88   23   36    2    38   74   90   12   13    9   196   47   1C   53    1                  4  496
   T•    2    0    1    0     1    1    2    0    0    0     4    1    C    1    C                  0   13
   R•   13    3    5    0     5   11   13    2    2    1    20    7    1    8    0                  1  100
   C•   14   19   19   25     9   17   13   25    9   10    14   10    5   11   33                24   13
 •
 5 •  143   30   34    2   112   95  141   12   30   14   348  126   55  121    1    1            3 1276
   T•    3    1    1    0     2    2    3    0    1    0     7    2    1    2    C    0            0   24
   R•   11    2    3    0     9    7   11    1    3    1    27   10    4    9    C    0            0  100
   C•   23   24   18   25    27   22   20   21   28   27    25   27   28   26   33   29           18   24
 •
 4 •   92   13   22    1   124   71  108   10   28    6   256   78   15   67                     3  856
   T•    2    0    0    0     2    1    2    0    1    0     5    1    C    1                     0   17
   R•   10    1    2    0    14    8   12    1    3    1    29    9    2    7                     0  100
   C•   15   10   12   13    30   16   15   10   20   12    18   17   1C   14                    6   17
```

```
 3 •    30    7    8    1    38   28   42    4   12    5    91   46    8   29                     1  352
   T•    1    0    0    0     1    1    1    0    0    0     2    1    C    1                     0    7
   R•    9    2    2    0    11    8   12    1    3    1    26   14    2    8                     0  100
   C•    5    6    4   13     9    6    6    7    9   10     7   10    4    6                     6    7
 •
 2 •    11    1    3         1    4   24    1    3    5    19   12    7    4                        55
   T•    0    0    0         0    0    0    0    0    0     0    0    0    0                         2
   R•   12    1    3         1    4   25    1    3    5    20   13    7    4                       100
   C•    2    1    2         0    1    3    2    2   10     1    3    4    1                         2
 •
 1 •    87   22   35    1    21   52  103   11   10    5   124   41   28   68             2    3  613
   T•    2    0    1    0     0    1    2    0    0    0     2    1    1    1             0    0   12
   R•   14    4    6    0     3    8   17    2    2    1    20    7    5   11             0    0  100
   C•   14   19   19   13     5   12   15   19    7   10     9    9   15   15            50   18   12
```

(1)   1   3   5   7   9   11   13   15   17
Q26   2   4   6   8   10   12   14   16

```
COLUMN   631       187       411       700       138       1388       193        3        17
 TOTAL        124         8       431        57        51         463        464        4
```

```
PERCENT   12        4         8        13         3        26          4         0        0
 TOTAL          2         0         8         1         1          9          9        0        0
```

GRAND TOTAL= 5270

CHI-SQUARE (OF TABLE)   382.00295
DF= 128

VALUES NOT ENTERED   89

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0118
```
MEAN( 1)=    8.15143    SD( 1)=    4.19398
MEAN( 2)=    4.95111    SD( 2)=    2.12062
```

Table 3-195. (Continued)

(Question 29)
I.   Production, Management and Social Sciences
     (32)   Miscellaneous arts and sciences
     (23)   Personnel and training
     (26)   Production and management
     (28)   Psychology and human engineering

II.   Medical Sciences
     (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
     (11)   Ground transportation equipment
     (13)   Installations and constructions
     (18)   Military sc ences and operations
     (24)   Photography and other reproduction processes
     (29)   Quartermaster equipment and supplies
     (31)   Ships and marine equipment
     (33)   Transportation

IV.   Aeronautics and Space Technology
     (01)   Aircraft and flight equipment
     (12)   Guided missiles
     (19)   Navigation

V.   Electronics and Electrical Engineering
     (05)   Communications
     (06)   Detection
     (07)   Electrical equipment
     (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
     (03)   Chemical warfare equipment and materials
     (04)   Chemistry
     (10)   Fuels and combustion
     (14)   Materials (nonmetallic)
     (17)   Metallurgy
     (22)   Ordnance

VII.   Physical Science
     (02)   Astronomy, geophysics and geography
     (09)   Fluid mechanics
     (20)   Nuclear physics and nuclear chemistry
     (21)   Nuclear propulsion
     (25)   Physics
     (27)   Propulsion systems

VIII.   Research and Research Equipment
     (30)   Research and research equipment

IX.   Mathematics
     (15)   Mathematics

(Question 26)
I.   (14)   Recall
II.   (13)   Telephone conversation
III.   (11)   Group discussion
IV.   (4)   Photographs
V.   (3)   Graphics (diagrams, drawings, etc.)
VI.   (2)   Tables or lists
VII.   (1)   Narrative text
VIII.   (18)   Narrative text and tables or lists
IX.   (9)   Graphics and lists
X.   (8)   Photographs and text
XI.   (7)   Graphics and text
XII.   (16)   Graphics, text and oral
XIII.   (17)   Graphics, text, oral, and recall
XIV.   (12)   Informal briefing, with chalk or pencil drawings
XV.   (5)   Microfilm - microfiche
XVI.   (6)   Slides or motion pictures
XVII.   (10)   Formal briefing or lecture

Table 3-196.   Essentiality of Information to Task vs. Class of Information

```
       Q30   IS CROSS TABULATED WITH    Q28    ON,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5358

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2      4       1
    1     14       1


( 2)            (EXTREME RIGHT VALUE IS ROW TOTAL)
Q30
   4 •  289   272   274   462   135   174   145   687  1106   176   223   127   117  4187
    To    5     5     5     9     3     3     3    1.    21     3     4     2     2    78
    Re    7     6     7    11     3     4     3    16    26     4     5     3     3   100
    Co   76    73    71    84    72    74    77    85    82    79    68    67    73    78

   3 •   66    78    92    66    40    47    37    94   185    44    82    46    32   909
    To    1     1     2     1     1     1     1     2     3     1     2     1     1    17
    Re    7     9    10     7     4     5     4    10    20     5     9     5     4   100
    Co   17    21    24    12    21    20    20    12    14    20    25    24    20    17

   2 •   23    19    16    17    10    13     7    25    53     3    23    15    11   235
    To    0     0     0     0     C     0     0     C     1     0     C     0     0     4
    Re   10     8     7     7     4     6     3    11    25     1    1C     6     5   1C0
    Co    6     5     4     3     5     6     4     3     4     1     7     8     7     4

   1 •        3     5     2     2     1           7     5     1           1               27
    To        0     0     0     0     0           0     0     0           C                1
    Re       11    19     7     7     4          26    19     4           4              100
    Co        1     1     0     1     0           1     0     0           1                1

*****************************************************************************************
( 1)   2           4           6           8          1C          12          14
Q28          3           5           7           9          11          13

COLUMN 378       387       187       189       1349       323       16C
 TOTAL     372       547       235       813       224       189

PERCENT  7         7         3         3         25         6         2
 TOTAL     6        10         4        15         4         3
```

```
GRAND TOTAL= 5358

CHI-SQUARE (OF TABLE)      134.00488
DF=   36

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.0069
MEAN( 1)=     7.9C183   SD( 1)=      3.31621
MEAN( 2)=     3.72751   SD( 2)=      0.56236
```

(Question 30)
I.	(4)	Neither essential nor helpful to successful task completion
II.	(3)	Not essential, but somewhat helpful to successful task completion
III.	(2)	Not essential, but extremely helpful to successful task completion
IV.	(1)	Absolutely essential to successful task completion

(Question 28)
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(5)	Math aids and formulae, computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding; administrative action

Table 3-197.   Extensiveness of Information Use in Task vs. Class of Information

```
     Q31    IS CROSS TABULATEO WITH      Q28     QR:

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5358

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
   2       6       1
   1      14


( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q31
   6 •    186   131   132   261    63    80    73   389   557    74   121    81    4C 2190
     T•     3     2     2     5     1     1     1     7    10     1     2     2     1    41
     R•     8     6     6    12     3     4     3    18    25     3     6     4     2   100
     C•    49    35    34    48    34    34    39    48    41    33    37    43    31    41
     •
   5 •    82   143   161   197    81    95    69   235   483    79   110    46    54  1835
     T•     2     3     3     4     2     2     1     4     9     1     2     1     1    34
     R•     4     8     9    11     4     5     4    13    26     4     6     3     3   100
     C•    22    38    42    36    43    40    37    29    36    35    34    24    34    34
     •
   4 •    28    45    48    44    19    32    21   103   150    37    37    24    35   623
     T•     1     1     1     1     0     1     0     2     3     1     1     0     1    12
     R•     4     7     8     7     3     5     3    17    24     6     6     4     6   100
     C•     7    12    12     8    10    14    11    13    11    17    11    13    22    12
     •
   3 •    71    46    40    42    18    25    23    78   135    33    57    32    17   617
     T•     1     1     1     1     0     0     0     1     3     1     1     1     0    12
     R•    12     7     6     7     3     4     4    13    22     5     9     5     3   100
     C•    19    12    10     8    10    11    12    10    10    15    17    17    11    12
     •
   2 •     8     4     2     2     3     2     2     4    12           2     5     1    47
     T•     0     0     0     0     0     0     0     0     0           0     0     0     1
     R•    17     9     4     4     6     4     4     9    26           4    11     2   100
     C•     2     1     1     0     2     1     1     0     1           1     3     1     1
     •
   1 •     3     3     4     1     3     1     1     4    12     1     1     1     3    38
     T•     0     0     0     0     0     0     0     0     0     0     0     0     0     1
     R•     8     8    11     3     8     3     3    11    32     3     3     3     8   100
     C•     1     1     1     0     2     0     1     0     1     0     0     1     2     1


     •
     •••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••••
( 1)     2           4           6           8          10          12          14
Q28           3           5           7           9          11          13

COLUMN  378         387         187         189        1349         328         160
TOTAL          372         547         235         813         224         189

PERCENT   7           7           3           3          25           6           2
TOTAL          6          10           4          15           4           3

GRAND TOTAL= 5358

CHI-SQUARE (OF TABLE)       202.45102
DF=   6C

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT =C.0191
MEAN( 1)=       7.9C183   SD( 1)=        3.31621
MEAN( 2)=       5.C0896   SD( 2)=        2.C8613
```

(Question 31)
I.	(6)	Not at all
II.	(5)	As a lead to other information
III.	(4)	As background information
IV.	(3)	In only small parts of the task
V.	(2)	In major portions of the task
VI.	(1)	Throughout the entire duration of the task

(Question 28)
II.	(1)	Concepts
III.	(8)	Raw data
IV.	(7)	Math aids and formulae; computer programs
V.	(3)	Designs or design techniques
VI.	(4)	Experimental processes and procedures
VII.	(11)	Test processes and procedures
VIII.	(13)	Evaluation
IX.	(9)	Specifications
X.	(6)	Performance and characteristics
XI.	(7)	Production processes and procedures
XII.	(10)	Technical status
XIII.	(12)	Utilization
XIV.	(2)	Cost and funding; administrative action

Table 3-198. Essentiality of Information to Task vs. Field of Information

```
---   030   IS CROSS TABULATED WITH ---   Q29    OR,  -   -   -- - --- --- --

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1 ---

NUMBER OF REPLICATIONS= 5334

VARIABLE MAXIMUM MINIMUM (AS SPECIFIED)
   2       4       1
   1       9       1
```

(Question 30)
I.   (4) Neither essential nor helpful to successful task completion
II. (3) Not essential, but somewhat helpful to successful task completion
III. (2) Not essential, but extremely helpful to successful task completion
IV. (1) Absolutely essential to successful task completion

```
( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q30
   4 *   439    71   298   740  1038   539   595   329   115 4164
   T*      8     1     6    14    19    10    11     8     2   78
   R*     11     2     7    18    25    13    14     8     3  100
   C*     71    75    64    82    80    76    80    73    68   78
   *
   3 *   149    21    44   123   191   128   115    99    39  909
   T*      3     0     1     2     4     2     2     2     1   17
   R*     16     2     5    14    21    14    13    11     4  100
   C*     24    22    12    14    15    18    15    22    23   17
   *
   2 *    29     2    12    35    57    33    34    19    13  234
   T*      1     0     0     1     1     1     1     0     0    4
   R*     12     1     5    15    24    14    15     8     6  100
   C*      5     2     3     4     4     5     5     4     8    4
   *
   1 *           1     1     2     5    12     3     1     2   27
   T*      0     0     0     0     0     0     0     0     0    1
   R*      4     4     4     7    19    44    11     4     7  100
   C*            1     0     0     0     2     0     0     4    1
   *
   *****************************************************************
  ( 1)     1          3         5         7         9
Q29                  2         4         6         8

COLUMN   617        355       1291       747         169
TOTAL          95          900       712       448

PERCENT   11          6         24         14          3
TOTAL           1          10        13        8
```

(Question 29)
I.   Production, Management and Social Sciences
     (32) Miscellaneous arts and sciences
     (23) Personnel and training
     (26) Production and management
     (28) Psychology and human engineering

II. Medical Sciences
     (16) Medical sciences

III. Mechanical, Industrial, Civil and Marine Engineering
     (11) Ground transportation equipment
     (13) Installations and constructions
     (18) Military sciences and operations
     (24) Photography and other reproduction processes
     (29) Quartermaster equipment and supplies
     (31) Ships and marine equipment
     (33) Transportation

IV. Aeronautics and Space Technology
     (01) Aircraft and flight equipment
     (12) Guided missiles
     (19) Navigation

V.   Electronics and Electrical Engineering
     (05) Communications
     (06) Detection
     (07) Electrical equipment
     (08) Electronics, electronic equipment

VI. Chemical Science and Materials
     (03) Chemical warfare equipment and materials
     (04) Chemistry
     (10) Fuels and combustion
     (14) Materials (nonmetallic)
     (17) Metallurgy
     (22) Ordnance

VII. Physical Science
     (02) Astronomy, geophysics and geography
     (09) Fluid mechanics
     (20) Nuclear physics and nuclear chemistry
     (21) Nuclear propulsion
     (25) Physics
     (27) Propulsion systems

VIII. Research and Research Equipment
     (30) Research and research equipment

IX. Mathematics
     (15) Mathematics

```
GRAND TOTAL= 5334

CHI-SQUARE (OF TABLE)          93.24404
OF=   24

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT -0.0163
MEAN( 1)=      4.97432   SD( 1)=        2.09426
MEAN( 2)=      3.72666   SD( 2)=        0.56285
```

Table 3-199. Extensiveness of Information Use in Task vs. Field of Information

```
____Q31    IS CROSS TABULATED WITH     Q29    OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5334

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2       6       1
    1       9       1


( 2)                (EXTREME RIGHT VALUE IS ROW TOTAL)
Q31
    6 •   233    34   160   439   512   262   320   163    60 2183
    T•      4     1     3     8    10     5     6     3     1   41
    '•     11     2     7    20    23    12    15     7     3  100
    C•     38    36    45    49    40    37    43    36    36   41
      •
    5 •   203    46   133   280   465   239   218   164    64 1832
    T•      4     1     2     5     9     4     4     4     3   34
    R•     11     3     7    15    25    13    12    10     3  100
    C•     33    48    37    31    36    34    29    41    38   34
      •
    4 •   103     4    29    82   140    91    96    50    23  618
    T•      2     0     1     2     3     2     2     1     0   12
    R•     17     1     5    13    23    15    16     8     4  100
    C•     17     4     8     9    11    13    13    11    14   12
      •
    3 •    71    10    30    92   153    95   100    47    18  616
    T•      1     0     1     2     3     2     2     1     0   12
    R•     12     2     5    15    25    15    16     8     3  100
    C•     12    11     8    10    12    13    13    10    11   12
      •
    2 •     3     1     2     3    10    14     9     4     1   47
    T•      0     0     0     0     0     0     0     0     0    1
    R•      6     2     4     6    21    30    19     9     2  100
    C•      0     1     1     0     1     2     1     1     1    1
      •
    1 •     4           1     4    11    11     4           3   38
    T•      0           0     0     0     0     0           0    1
    R•     11           3    11    29    29    11           8  100
    C•      1           0     0     1     2     1           2    1



      •
    •••••••••••••••••••••••••••••••••••••••••••••••••••••••••
  ( 1)    1           3           5           7           9
  Q29          2           4           6           8

  COLUMN   617         355        1291         747         169
  TOTAL          95          900         712         448

  PERCENT   11           6          24          14           3
  TOTAL           1          16          13           8

  GRAND TOTAL= 5334

  CHI-SQUARE (OF TABLE)      118.32748
  DF=  40

  (THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
  EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

  CORRELATION COEFFICIENT= -0.0263
  MEAN(  1)=     4.97-32   SD(  1)=      2.09826
  MEAN(  2)=     5.00750   SD(  2)=      1.08652
```

(Question 31)
I.   (6)   Not at all
II.   (5)   As a lead to other information
III.   (4)   As background information
IV.   (3)   In only small parts of the task
V.   (2)   In major portions of the task
VI.   (1)   Throughout the entire duration of the task

(Question 29)
I.   Production Management and Social Sciences
    (32)   Miscellaneous arts and sciences
    (23)   Personnel and training
    (26)   Production and management
    (28)   Psychology and human engineering

II.   Medical Sciences
    (16)   Medical sciences

III.   Mechanical, Industrial, Civil and Marine Engineering
    (11)   Ground transportation equipment
    (13)   Installations and constructions
    (18)   Military sciences and operations
    (24)   Photography and other reproduction processes
    (29)   Quartermaster equipment and supplies
    (31)   Ships and marine equipment
    (33)   Transportation

IV.   Aeronautics and Space Technology
    (01)   Aircraft and flight equipment
    (12)   Guided missiles
    (19)   Navigation

V.   Electronics and Electrical Engineering
    (05)   Communications
    (06)   Detection
    (07)   Electrical equipment
    (08)   Electronics, electronic equipment

VI.   Chemical Science and Materials
    (03)   Chemical warfare equipment and materials
    (04)   Chemistry
    (10)   Fuels and combustion
    (14)   Materials (nonmetallic)
    (17)   Metallurgy
    (22)   Ordnance

VII.   Physical Science
    (02)   Astronomy, geophysics and geography
    (09)   Fluid mechanics
    (20)   Nuclear physics and nuclear chemistry
    (21)   Nuclear propulsion
    (25)   Physics
    (27)   Propulsion systems

VIII.   Research and Research Equipment
    (30)   Research and research equipment

IX.   Mathematics
    (15)   Mathematics

Table 3-200.   Extensiveness of Information Use in Task vs.
Essentiality of Information to Task

```
    Q31    IS CROSS TABULATED WITH        Q30      OR,

VARIABLE  2 IS CROSS TABULATED WITH VARIABLE  1

NUMBER OF REPLICATIONS= 5359

VARIABLE MAXIMUM MINIMUM  (AS SPECIFIED)
    2        6        1
    1        4        1
```

(2)			(EXTREME RIGHT VALUE IS ROW TOTAL)

Q31				
• 6 •	15	135	2040	2190
T•	0	3	38	41
R•	1	6	93	100
C•	6	15	49	41
•				
5 •	21	340	1475	1836
T•	0	6	28	34
R•	1	19	80	100
C•	9	37	35	34
•				
4 •	1	63	212	347	623
T•	0	1	4	6	12
R•	0	10	34	56	100
C•	4	27	23	8	12
•				
3 •	10	122	197	288	617
T•	0	2	4	5	12
R•	7	20	32	47	100
C•	37	52	22	7	12
•				
2 •	1	3	17	26	47
T•	0	0	0	0	1
R•	2	6	36	55	100
C•	4	1	2	1	1
•				
1 •	15	11	9	3	38
T•	0	0	0	0	1
R•	39	29	24	8	100
C•	56	5	1	0	1

(Question 31)
I.   (6)   Not at all
II.   (5)   As a lead to other information
III. (4)   As background information
IV.   (3)   In only small parts of the task
V.   (2)   In major portions of the task
VI.   (1)   Throughout the entire duration of the task

(Question 30)
I.   (4)   Neither essential nor helpful to successful task completion
II.   (3)   Not essential, but somewhat helpful to successful task completion
III. (2)   Not essential, but extremely helpful to successful task completion
IV.   (1)   Absolutely essential to successful task completion

```
    •
    •••••••••••••••••••••••••••••••••c
  ( 1)    1      3
  Q30           2          4

COLUMN   27     910
  TOTAL         235        4187

PERCENT   0      16
  TOTAL          4         78

GRAND TOTAL= 5359

CHI-SQUARE (OF TABLE)     2293.95096
DF=  15

(THE FOLLOWING COMPUTATIONS ARE BASED ON ALL DATA AS ENTERED
EVEN IF SOME ARE EXCLUDED FROM THE ABOVE TABLE).

CORRELATION COEFFICIENT  0.4624
MEAN( 1)=       3.72737   SD( 1)=     0.56240
MEAN( 2)=       5.00996   SD( 2)=     1.08603
```

4. CORRELATION MATRIX

4.1 INTERPRETATION

This section presents the complete correlation matrix for questions, combinations of questions and indices which summarize profiles. Although it was developed as a by-product of the regression analysis, it is presented in Volume IIIA rather than Volume IIIB; for it has been discussed in connection with the two-way frequency distributions which appear in Section 3.

An entry in the matrix gives the correlation between the question (combination of questions or index) identified to the left of the matrix with the row of the entry, and the question (combination of questions or index) identified at the top of the matrix with the column of the entry. Only the upper triangular half of the matrix need be presented, since the matrix is symmetric.

As an example, the correlation between Q55 and 1/2 (Q49 + Q58) is -.033.

4.2 MATRIX

QUESTION		(Q48)	(Q50A)	(Q50C)	(Q50B)	(Q51)	(Q52)	(Q55)	(Q56)
Q48	User's Age	(Q48)1.000	-0.321	-0.124	-0.732	0.576	0.517	0.034	-0.114
Q50A	User's Highest Degree	(Q50A)1.000	0.54.	5.354	-4.024	-0.113	-0.393	0.097
Q50C	User's Field of Degree	(Q50C)1..0?	?.31?	-0.071	-3.113	-3.230	0.300
Q50B	User's Year of Degree	(Q50B)1.000	-0.552	-0.495	-0.155	0.140
Q51	User's Job Experience	(Q51)1.000	0.351	-0.053	-0.084
Q52	User's Company Experience	(Q52)1.000	0.140	-0.098
Q55	User's Kind of Position	(Q55)1.000	-0.119
Q56	User's Field of Position	(Q56)1.000
Q54	User's Equivalent GS Rating								(Q54)
Q49	Number of Personnel Supervised by User								
Q54	User's Type of Activity								

A

(Q55)	(Q56)	(Q58)	(Q49)	(Q64)	(Q2)	(Q7)	(Q9)	(Q8)	(Q10)	(Q6)	(Q5)	(Q3)	(Q4)	(Q63)
0.034	-0.114	0.433	0.189	0.193	-0.037	0.067	-0.035	0.023	-0.092	0.029	0.060	0.070	-0.086	0.3
-0.393	0.097	0.434	0.029	0.112	-0.137	0.123	-0.355	-0.057	0.054	0.064	0.043	0.174	-0.057	0.2
-0.230	0.300	0.205	-0.004	0.053	-0.044	0.059	-0.173	-0.046	0.240	0.011	-0.017	0.066	0.024	0.0
-0.155	0.140	-0.287	-0.152	-0.127	0.014	-0.024	-0.112	-0.036	0.112	-0.001	-0.044	-0.022	0.079	0.0
-0.053	-0.084	0.357	0.163	0.125	-0.072	0.364	-0.054	-0.078	-0.077	0.041	0.007	0.089	-0.072	0.1
0.140	-0.098	0.255	0.205	0.251	-0.024	0.141	0.072	0.076	-0.097	-0.039	0.058	0.057	-0.163	0.0
(Q55)1.000	-0.159	-0.214	0.093	0.042	0.125	-0.114	0.563	0.267	-0.170	-0.034	0.043	-0.173	-0.086	-0.2
	(Q56) 1.000	-0.021	-0.127	-0.115	0.006	-0.039	-0.135	-0.160	0.696	-0.065	-0.120	0.057	0.105	0.0
		(Q58) 1.000	0.412	0.439	-0.334	0.214	-0.257	-0.017	-0.035	0.108	0.105	0.146	-0.184	0.2
			(Q49) 1.000	0.500	-0.314	0.384	0.038	0.057	-0.114	0.072	0.099	0.031	-0.276	0.0
				(Q64)1.000	-0.315	0.125	-0.038	0.043	-0.102	0.082	0.087	0.049	-0.298	0.1

Q2	Task Initiator	(Q2)1.000	0.040	0.141
Q7	Task Recipient	(Q7) 1.000	-0.187	-0.067
Q9	Kind of Task	(Q9) 1.000	0.181	-0.133
Q4	Class of Task	(Q8) 1.000	-0.147	-0.055
Q10	Field of Task	(Q10, 1.000	-0.123	0.044
Q6	Formality of Task Output	(Q6) 1.000	0.021	0.111
Q5	Type of Task Output	(Q5) 1.000	-0.105	-0.055
Q3	Task Duration	(Q3) 1.000	-0.057	0.2
Q4	Percentage of Time on Task	(Q4) 1.000	0.0
Q64	Interviewer Assessment of Task Creativity	(Q63) 1.0

Q55   Use of Company TIC...
Q40   Use of DOD Specialized In
Q41   Use of Other Specialized I
Q34   Use of STAR ...
Q44   Use of English Abstracts
Q37   Use of TAB ...
Q39   Use of DDC ...
Q42   Encounter of Restrictions
Q45   Encounter of Difficulties
Q59   Interviewer Assessment of

B

(Q63)	(Q4)	(Q63)	(Q35)	(Q40)	(Q41)	(Q38)	(Q44)	(Q37)	(Q39)	(Q42)	(Q45)	(Q59)	QUESTION
0.0	-0.386	0.355	0.070	0.093	0.096	-0.002	0.065	0.032	0.079	-0.010	-0.043	0.101	Q4
0.2	-0.097	0.214	0.225	0.107	0.160	0.112	0.332	0.211	0.255	0.103	0.114	0.265	Q50A
0.0	0.324	0.088	0.133	0.055	0.093	0.036	0.169	0.117	0.123	0.065	0.238	0.137	Q50C
0.0	0.079	0.036	0.021	-0.053	-0.024	0.152	0.039	0.062	0.040	0.046	0.051	0.015	Q50B
0.1	-0.072	0.123	0.133	0.093	0.061	-0.017	0.107	-0.006	0.036	-0.021	-0.301	0.14.	Q51
0.0	-0.163	0.097	-0.125	0.033	0.015	-0.037	-0.021	-0.057	-0.019	-0.004	-0.041	0.019	Q52
-0.2	-0.004	-0.253	-0.071	-0.071	-0.104	-0.114	-0.300	-0.215	-0.303	-0.160	-0.041	-0.12	Q55
0.0	0.105	0.045	0.065	0.017	-0.044	0.050	0.137	0.064	0.085	-0.145	-0.010	0.121	Q56
0.2	-0.184	0.214	0.177	0.197	0.166	0.093	0.244	0.154	0.304	0.156	0.101	0.289	Q54
0.0	-0.276	0.085	0.037	0.124	0.071	0.028	0.040	0.012	0.071	0.094	0.011	0.094	Q49
0.1	-0.299	0.117	0.393	0.130	0.088	0.065	0.055	0.164	0.121	0.095	0.242	0.143	Q54
-0.0	0.153	-0.069	-0.101	-0.025	-0.037	-0.015	-0.151	-0.057	-0.043	0.216	-0.092	-0.105	Q2
0.0	-0.091	0.093	0.093	0.033	0.043	-0.001	0.095	0.071	0.105	0.930	0.913	0.137	Q7
-0.2	-0.062	-0.732	-0.780	-0.077	-0.118	-0.105	-0.290	-0.191	-0.287	-0.122	-0.242	-0.297	Q9
-0.2	-0.110	-0.224	-0.019	0.031	0.036	-0.008	-0.039	-0.051	-0.027	-0.013	-0.054	-0.075	Q8
0.0	0.067	0.021	0.004	-0.019	-0.078	-0.001	0.072	0.026	0.037	-0.011	-0.010	-0.010	Q10
0.1	0.068	0.153	0.133	0.047	0.031	0.026	0.031	0.047	0.064	0.031	-0.019	0.037	Q6
-0.0	-0.055	-0.342	0.093	0.086	0.129	0.064	0.034	0.032	0.052	0.043	0.261	0.032	Q5
0.2	-0.097	0.203	0.072	0.027	0.066	0.024	0.124	0.078	0.075	0.062	0.025	0.141	Q3
0.0	(Q4) 1.000	0.023	0.006	-0.070	-0.098	0.025	-0.063	0.021	0.002	0.016	-0.043	-0.558	Q4
63)1.0	. . . .	(Q63)1.000	0.149	0.607	0.072	0.059	0.131	0.095	0.204	0.032	0.001	0.263	Q63
...	...of Company TIC	(Q35) 1.000	0.263	0.197	0.239	0.314	0.271	0.293	0.113	0.102	0.332	Q35
lized in	... of DC ' Specialized Information Centers (Q40)1.000		0.171	0.163	0.214	0.305	0.134	0.133	0.255	Q40
alized I.	... of '' er specialized Information Centers . . . . (Q41) .000		0.087	0.229	0.089	0.149	0.093	0.110	0.193	Q41
. . . .	... of ..AR . . . . (Q38) ..000		0.212	0.504	0.243	0.091	0.053	0.212	Q38
tracts	... of English Abstracts or Translations . . . . (Q44) 1.000		0.283	0.271	0.116	0.085	0.312	Q44
. . . .	... of TAB . . . . (Q37) 1.000		0.414	0.165	0.265	0.293	Q37
. .	... of DDC . . . . (Q39) 1.000		0.217	0.112	0.335	Q39
ictions	ounter of Restrictions . . . . (Q42)1.000		0.124	0.174	Q42
ulties -	counter of Difficulties . . . . (Q45) 1.000		0.176	Q45
ment of	erviewer Assessment of Information Needs of User . . . . . . (Q59) 1.000	Q59

Figure 4-1. Correlation Matrix

QUESTION		Q26	Q29	Q25	Q22	Q24	Q21	Q20	Q
Q48	User's Age	0.043	-0.004	0.013	0.019	0.018	0.016	0.007	-0.
Q60A	User's Highest Degree	-0.043	0.058	0.149	0.044	0.071	0.002	0.044	0.
Q60C	User's Field of Degree	-0.069	0.195	0.007	0.029	0.016	-0.006	0.005	0.
Q60B	User's Year of Degree	-0.072	0.117	0.075	-0.013	0.003	-0.028	0.016	0.
Q51	User's Job Experience	0.019	-0.041	0.045	0.035	0.037	-0.006	-0.012	-0.
Q52	User's Company Experience	0.091	-0.094	-0.016	-0.035	0.019	-0.007	-0.011	-0.
Q55	User's Kind of Position	0.117	-0.181	-0.067	-0.055	-0.065	-0.033	-0.052	-0.
Q56	User's Field of Position	-0.111	0.015	0.065	-0.006	0.003	-0.007	0.013	-0.
Q50	User's Equivalent GS Rating	0.045	-0.035	0.073	0.071	0.023	0.030	0.044	0.
Q49	Number of Personnel Supervised by User	0.047	-0.119	0.045	0.029	0.033	0.014	-0.018	0.
Q54	User's Type of Activity	0.246	-0.116	0.055	0.055	0.063	0.030	0.021	0.
Q2	Task Initiator	0.055	-0.035	-0.024	-0.021	-0.051	0.063	0.040	0.
Q7	Task Recipient	-0.006	-0.021	0.067	0.021	0.054	0.009	0.024	0.
Q8	Kind of Task	0.015	-0.132	-0.049	-0.045	-0.074	-0.036	-0.067	-0.
Q9	Class of Task	0.174	-0.147	-0.022	-0.034	0.011	-0.019	-0.006	0.
Q10	Field of Task	-0.041	0.068	-0.024	-0.021	-0.019	-0.007	0.003	0.
Q6	Formality of Task Output	0.011	-0.075	0.029	0.022	0.040	0.017	0.002	0.
Q5	Type of Task Output	0.059	-0.132	0.015	0.013	0.035	0.005	0.001	0.
Q3	Task Duration	-0.019	0.035	0.045	0.046	0.024	0.115	0.037	0.
Q4	Percentage of Time on Task	-0.052	0.196	0.017	0.002	0.021	0.021	0.001	-0.
Q63	Interviewer Assessment of Task Creativity	-0.034	0.087	0.145	0.074	0.120	-0.009	0.029	0.
Q35	Use of Company TIC	-0.	0.11	0.05	0.057	0.019	0.015	0.067	0.
Q40	Use of DOD Specialized Information Centers	0.004	-0.019	0.009	0.059	0.010	0.030	0.074	0.
Q41	Use of Other Specialized Information Centers	0.027	-0.069	0.053	0.011	0.040	-0.017	0.057	0.
Q38	Use of STAR	0.032	0.024	0.061	0.035	0.067	-0.007	0.046	0.
Q44	Use of English Abstracts or Translations	0.039	0.069	0.035	0.033	0.052	0.014	0.068	0.
Q37	Use of TAB	-0.029	-0.004	0.033	0.047	0.018	0.005	0.096	0.
Q39	Use of DDC	-0.026	0.036	0.036	0.032	0.005	-0.026	0.110	0.
Q42	Encounter of Restrictions	0.039	-0.027	0.028	0.044	0.024	0.006	0.026	0.
Q45	Encounter of Difficulties	-0.005	-0.007	0.031	0.059	-0.009	0.031	0.028	0.
Q59	Interviewer Assessment of Information Needs of User	-0.107	0.043	0.121	0.109	0.078	0.070	0.107	0.
Q26	Class of Information	(Q26) 1.000	-0.206	-0.037	-0.002	-0.036	0.006	-0.003	0.
Q29	Field of Information		(Q29) 1.000	0.016	-0.025	0.011	-0.031	0.014	0.
Q25	Desired Depth of Information Media			(Q25) 1.000	0.074	0.092	0.075	0.121	0.
Q22	Desired Volume of Information Media				(Q22) 1.000	0.022	0.026	0.160	0.
Q24	Actual Depth of Information Media					(Q24) 1.000	0.049	0.058	0.
Q21	Actual Volume of Information Media						(Q21) 1.000	0.148	0.
Q20	Desired Composition of Information Media							(Q20) 1.000	0.
Q27	Desired Layout of Information Media								(Q27) 1.

Q18	Actual Composition of Information Med
Q26	Actual Layout of Information Media
Q19	Usual Composition of Information Medi
Q15	Why Used First Source for Information
Q14	Location of First Source for Informati
Q17	Acquisition from First Source for Infor
Q13	Desired Acquisition Time
Q12	Actual Acquisition Time
Q30	Essentiality of Information
Q23	Usefulness of Title Listings or Abstrac
Q32	Discovery of Post Task Information
Q62	Interviewer Assessment of Difficulty in
Q61	Interviewer Assessment of Difficulty in

*F $= 1/2 (|Q9 - Q55| + |Q10 - Q56|)$

**E $= 1/4 (Q43 Q35) + 1/2 (Q40 + Q41) + 1/2 (Q38 + Q44) + 1/2 (Q37 + Q39)$

***P $= 1/2 (Q42 Q43) + Q45 Q46)$

****I $= 1/6 (|Q16 - Q28| + |1/2 (Q22 + Q25) - 1/$
$1/2 (Q18 - Q25)| + (1 - Q17)| + |Q13$

A

Q20	Q27	Q18	Q26	Q19	Q15	Q14	Q17	Q13	Q12	Q30	Q23	Q32	Q62	Q32
0.007	-0.006	0.016	0.004	0.015	-0.025	0.025	0.015	0.091	0.086	0.045	0.010	-0.078	-0.009	.078
0.044	0.049	0.005	0.082	0.052	0.024	0.007	-0.069	0.199	0.126	-0.045	0.120	0.003	0.124	.001
0.005	0.016	0.016	0.005	0.054	0.017	0.009	-0.032	0.074	0.040	-0.046	0.072	-0.014	0.081	.014
0.016	0.036	0.017	0.022	-0.000	0.030	-0.025	-0.025	-0.035	-0.052	-0.061	0.032	0.058	0.070	.058
-0.012	-0.016	-0.022	-0.007	-0.013	0.013	-0.010	-0.002	0.049	0.057	0.059	0.023	-0.014	0.053	.014
-0.011	-0.032	-0.015	-0.044	-0.011	-0.004	0.043	0.062	0.060	0.045	0.026	-0.058	-0.072	-0.015	.072
-0.052	-0.067	-0.057	-0.060	-0.038	-0.020	0.013	0.092	-0.161	-0.399	0.000	-0.134	-0.050	-0.167	.050
0.013	-0.001	0.020	-0.011	0.004	0.027	0.004	-0.005	0.037	0.009	-0.033	0.025	0.012	0.017	.012
0.046	0.076	0.048	0.080	0.047	-0.008	0.071	-0.040	0.184	0.153	0.022	0.114	0.002	0.075	.002
-0.010	0.043	-0.013	0.045	-0.035	0.005	0.044	0.044	0.044	0.074	0.015	-0.010	0.011	0.003	.011
0.021	0.040	0.017	0.025	0.009	0.001	0.072	0.060	0.060	0.089	0.005	0.024	0.071	0.035	.071
0.040	0.038	0.032	0.015	-0.023	0.002	0.076	0.038	-0.092	-0.024	-0.006	-0.071	-0.003	-0.098	.003
0.024	0.036	0.037	0.027	0.006	0.014	0.042	-0.031	0.080	-0.058	0.017	0.052	0.014	0.048	.014
-0.067	-0.057	-0.082	-0.043	-0.019	-0.024	0.011	0.083	-0.154	-0.181	-0.018	-0.169	-0.093	-0.179	.093
-0.006	0.025	-0.025	0.036	-0.032	-0.009	0.004	0.047	-0.035	-0.000	-0.002	-0.067	-0.025	-0.192	.025
0.003	0.016	0.009	0.008	0.007	-0.017	-0.026	0.008	0.008	-0.033	-0.030	0.010	0.023	0.022	.023
0.002	0.015	0.025	0.025	-0.074	0.026	0.029	-0.091	0.978	0.074	0.054	0.078	0.016	0.098	.016
0.001	0.015	-0.019	0.033	-0.013	0.011	0.006	-0.008	-0.012	0.000	-0.012	0.034	-0.000	0.030	.000
0.037	0.100	0.045	0.091	0.001	-0.026	0.065	-0.109	0.519	0.375	0.025	0.196	0.054	0.072	.054
0.001	-0.005	0.024	-0.000	-0.003	-0.008	-0.025	-0.007	-0.073	-0.039	0.038	-0.016	0.039	-0.017	.035
0.029	0.005	0.051	0.051	-0.030	0.080	0.040	-0.027	0.160	0.131	0.026	0.132	-0.005	0.207	.005
0.047	0.054	0.072	0.043	0.045	0.042	0.041	-0.065	0.156	0.079	-0.028	0.215	0.057	0.129	.057
0.074	0.097	0.061	0.093	-0.071	0.056	0.113	-0.042	0.056	0.069	-0.007	0.142	0.104	0.142	.104
0.057	0.064	0.050	0.067	-0.000	0.057	0.087	-0.045	0.080	0.071	-0.06	0.102	0.069	0.040	.069
0.046	0.088	0.053	0.084	0.010	0.030	0.048	-0.041	0.036	0.247	0.005	0.139	0.023	0.111	.023
0.068	0.076	0.075	0.042	0.026	0.048	0.039	-0.073	0.135	0.074	-0.036	0.173	0.047	0.144	.047
0.096	0.072	0.032	0.062	0.006	0.037	0.068	-0.072	0.078	0.192	-0.012	0.152	0.051	0.136	.051
0.110	0.076	0.107	0.070	0.006	0.050	0.062	-0.065	0.108	0.090	-0.016	0.134	0.051	0.171	.061
0.026	0.047	0.025	0.051	-0.033	-0.022	0.069	-0.046	0.107	0.121	0.074	0.096	0.057	0.072	.057
0.028	0.031	0.001	0.025	-0.002	-0.003	0.008	-0.116	0.090	0.085	-0.021	0.077	0.147	0.069	.147
0.107	0.104	0.116	0.094	0.014	-0.016	0.104	-0.118	0.196	0.183	0.021	0.236	0.144	0.330	.144
-0.003	0.035	-0.020	0.081	0.003	0.010	0.084	-0.008	0.018	0.045	0.006	-0.039	-0.015	0.001	.015
0.014	0.009	0.022	0.007	0.019	0.017	-0.032	0.008	0.007	-0.018	0.011	0.046	0.015	0.043	.015
0.121	0.114	0.146	0.117	-0.033	0.048	0.046	-0.051	0.061	0.095	0.061	0.151	0.017	0.089	.017
0.160	0.254	0.154	0.237	0.094	-0.032	0.201	-0.279	0.227	0.253	0.032	0.249	0.104	0.040	.104
0.058	0.058	0.127	0.059	-0.006	0.053	-0.021	0.086	0.013	0.006	0.121	0.093	-0.001	0.067	.001
0.148	0.243	0.138	0.232	0.071	-0.029	0.185	-0.254	0.191	0.215	0.056	0.208	0.058	-0.019	.058
(Q20) 1.000	0.258	0.799	0.241	-0.009	-0.049	0.185	-0.118	0.051	0.093	-0.060	0.272	0.057	0.051	.057
	(Q27) 1.000	0.257	0.863	-0.003	-0.044	0.195	-0.194	0.175	0.207	-0.023	0.206	0.047	0.054	.041

...ion of Information Media . (Q18) 1.000, 0.248, -0.020, -0.057, 0.167, -0.075, 0.046, 0.050, -0.032 | 0.296, 0.029, 0.043 | .002

...f Information Media · · · · · · · (Q26) 1.000, 0.013, -0.043, 0.171, -0.192, 0.164, 0.198, -0.015 | 0.195, 0.045, 0.055 | .045

...ion of Information Media · · · · · · · · · · · · (Q19) 1.000, -0.039, -0.032, -0.056, 0.017, 0.014, -0.051 | 0.090, 0.002, -0.010 | .002

...st Source for Information · · · · · · · · · · · · · · · (Q15) 1.000, 0.046, -0.041, -0.020, -0.006 | 0.033, -0.052, 0.022 | .052

...t First Source for Information · · · · · · · · · · · · · · · · (Q14) 1.000, -0.076, 0.177, 0.240, -0.349 | 0.142, 0.068, 0.070 | .068

...n First Source for Information · · · · · · · · · · · · · · · (Q17) 1.000, -0.193, -0.227, 0.077 | -0.261, -0.097, -0.111 | .097

...tion Time · · · · · · · · · · · · · · · (Q13) 1.000, 0.684, -0.027 | 0.146, 0.085, 0.083 | .085

...Information · · · · · · · · · · · · · · · (Q12) 1.000, 0.019 | 0.163, 0.092, 0.095 | .092

...Title Listings or Abstracts · · · · · · · · · · (Q30) 1.000 | -0.038, -0.047, -0.012 | .047

...st Task Information · · · · · · · · · · · · · · · · (Q23) 1.000 | 0.073, 0.130 | .07

...essment of Difficulty in Acquisition of Information · · · · · · (Q32) 1.000, 0.199 | .00

...essment of Difficulty in Use of Information · · · · · · · · (Q62) 1.000 | ..

46)

$$| 1/2 (Q22 + Q25) - 1/2 (Q21 \times Q24) | + | 1/2(Q20 + Q27) -$$
$$+ (1 - Q17) | + | Q13 - Q12 | + | Q32)$$

1/2(Q19+Q52)	User's Level · · · ·
1/2(Q2+Q7)	Task Direction · ·
1/2(Q8+Q9)	Kind and Class of
1/2(Q5+Q6)	Form of Task Output
Q3xQ4	Task Time · · · · ·
F*	User - Task Flexi
Q33xQ35	Use of Company T
1/2(Q10+Q41)	Use of Specialized
1/2(Q38+Q44)	Use of Specialized
1/2(Q37+Q39)	Use of TAB and DD
1/2(Q51+Q52)	User's Experience
E**	Utilization Effort
p***	Utilization Proble
1/2(Q14+Q15)	Location of and Wh
1/2(Q14+Q17)	Location of and Ac
1/2(Q22+Q25)	Desired Content of
1/2(Q21+Q24)	Actual Content of
1/2(Q20+Q27)	Desired Form of
1/2(Q18+Q26)	Actual Form of Inf
1/2(Q61+Q62)	Difficulty in Acqui
I****	Inadequacy of Sear
1/2(Q30+Q31)	Contribution of Inf

Q32	Q62	Q61	(Q49 + Q50)/2	(Q2+Q7)/2	(Q8+Q9)/2	(Q5+Q6)/2	Q3 x Q4	F*	Q33 x Q35	(Q40+Q41)/2	(Q38+Q44)/2	(Q37+Q39)/2	(Q51+Q52)/2	E**
.078	-0.009	0.080	0.339	-0.002	0.012	0.062	0.026	0.040	0.070	0.114	0.051	0.067	0.466	0.112
.003	0.125	0.194	0.223	-0.062	-0.266	0.075	0.139	-0.064	0.226	0.158	0.317	0.279	-0.085	0.333
.014	0.087	0.116	0.093	-0.012	-0.141	-0.005	0.073	-0.080	0.132	0.063	0.166	0.139	-0.111	0.164
.058	0.070	0.009	-0.242	0.001	-0.096	-0.032	0.027	-0.036	0.021	-0.055	0.054	0.054	-0.638	0.019
.014	0.053	0.126	0.283	-0.034	-0.092	0.033	0.059	-0.002	0.033	0.129	0.079	0.027	0.842	0.080
.072	-0.315	-0.040	0.265	-0.006	0.098	0.014	-0.042	0.542	-0.025	0.034	-0.034	-0.035	0.800	-0.015
.050	-0.167	-0.199	-0.033	0.059	0.559	0.006	-0.195	0.114	-0.273	-0.103	-0.292	-0.319	0.046	-0.335
.012	0.017	0.020	-0.100	-0.012	-0.192	-0.130	0.095	-0.112	0.065	-0.005	0.109	0.091	-0.110	0.083
.002	0.075	0.212	0.761	0.014	-0.176	0.149	0.051	-0.021	0.170	0.235	0.238	0.313	0.376	0.344
.011	0.003	0.046	0.905	0.026	0.062	0.120	-0.103	0.051	0.007	0.134	0.045	0.062	0.222	0.098
.071	0.035	0.091	0.432	0.044	0.031	0.118	-0.088	0.109	0.083	0.146	0.073	0.134	0.224	0.164
.003	-0.098	-0.105	-0.054	0.893	0.113	-0.004	0.051	0.041	-0.101	-0.037	-0.129	-0.055	-0.063	-0.101
.014	-0.048	0.099	0.159	0.487	-0.165	0.211	0.064	0.006	0.093	0.042	0.076	0.109	0.065	0.111
.093	-0.179	-0.244	-0.093	0.035	0.760	-0.038	-0.184	0.155	-0.280	-0.114	-0.260	-0.297	0.001	-0.325
.025	-0.192	-0.151	0.033	-0.000	0.777	0.036	-0.120	0.097	-0.019	0.042	-0.034	-0.040	-0.005	-0.013
.023	0.072	0.025	-0.058	-0.023	-0.179	-0.150	0.057	-0.084	0.009	-0.042	0.058	0.039	-0.105	0.015
.016	0.008	0.050	0.132	0.200	-0.088	0.707	0.133	0.053	0.103	0.040	0.037	0.068	0.004	0.086
.000	0.050	0.020	0.119	-0.066	0.086	0.722	-0.113	0.056	0.093	0.128	0.056	0.053	0.038	0.117
.054	0.072	0.167	0.090	0.010	-0.158	0.003	0.713	-0.015	0.072	0.051	0.111	0.087	0.090	0.108
.039	-0.017	0.005	-0.282	0.120	-0.113	0.008	0.389	-0.062	0.006	-0.100	-0.040	0.009	-0.140	-0.045
.005	0.261	0.340	0.161	-0.016	-0.297	0.074	0.199	-0.047	0.149	0.104	0.180	0.197	0.084	0.217
.057	0.129	0.202	0.084	-0.044	-0.192	0.137	0.070	-0.011	1.000	0.254	0.362	0.330	0.007	0.635
.104	0.162	0.146	0.181	-0.007	-0.028	0.094	0.019	0.066	0.203	0.905	0.244	0.319	0.082	0.651
.069	0.040	0.049	0.127	-0.017	-0.051	0.092	0.016	0.054	0.197	0.574	0.223	0.151	0.048	0.427
.023	0.111	0.103	0.063	-0.013	-0.072	0.064	0.057	0.060	0.209	0.190	0.619	0.370	-0.032	0.456
.047	0.144	0.215	0.142	-0.089	-0.210	0.046	0.078	-0.044	0.334	0.266	0.899	0.316	0.057	0.571
.051	0.136	0.164	0.101	-0.018	-0.156	0.055	0.093	-0.001	0.271	0.216	0.453	0.680	-0.036	0.587
.061	0.171	0.242	0.193	0.010	-0.202	0.081	0.072	-0.020	0.293	0.317	0.327	0.949	0.012	0.715
.057	0.072	0.128	0.115	0.028	-0.086	0.056	0.073	0.029	0.113	0.147	0.129	0.233	-0.016	0.230
.147	0.069	0.072	0.055	-0.066	-0.091	0.031	0.019	0.019	0.102	0.158	0.097	0.113	-0.024	0.171
.144	0.330	0.324	0.205	-0.030	-0.239	0.089	0.114	-0.005	0.332	0.306	0.346	0.347	0.101	0.465
.015	0.001	-0.044	0.081	0.047	0.191	0.049	-0.012	0.032	-0.025	0.029	-0.032	-0.032	0.061	-0.017
.015	0.043	0.046	-0.101	-0.013	-0.179	-0.144	0.063	-0.107	0.028	-0.044	0.067	0.028	-0.080	0.017
.017	0.089	0.055	0.066	0.005	-0.071	0.065	0.047	-0.020	0.055	0.072	0.104	0.089	0.021	0.112
.104	0.040	0.070	0.047	-0.009	-0.050	0.025	0.131	0.023	0.042	0.051	0.042	0.042	0.000	0.064
.001	0.067	0.027	0.053	-0.020	-0.049	0.087	0.038	-0.008	0.053	0.026	0.063	0.075	0.035	0.074
.058	-0.019	0.019	0.028	0.004	-0.017	0.016	0.114	0.029	0.016	0.018	0.008	-0.019	-0.007	0.005
.057	0.051	0.093	0.008	0.046	-0.047	0.002	0.025	0.013	0.047	0.086	0.076	0.122	-0.014	0.121
.047	0.054	0.040	0.066	0.032	-0.020	0.023	0.089	-0.003	0.054	0.100	0.100	0.086	-0.030	0.121
.029	0.043	0.079	0.013	0.044	-0.069	0.008	0.044	0.005	0.072	0.072	0.084	0.118	-0.023	0.124
.045	0.055	0.034	0.070	0.025	-0.007	0.041	0.083	-0.005	0.043	0.106	0.104	0.078	-0.030	0.118
.002	-0.010	0.006	-0.003	-0.018	-0.033	-0.013	-0.002	-0.015	0.035	-0.018	0.025	0.007	-0.014	0.012
.052	0.022	-0.006	-0.001	0.008	-0.021	0.026	-0.019	-0.046	0.042	0.071	0.052	0.053	0.006	0.071
.068	0.070	0.098	0.065	0.085	0.010	0.024	0.052	0.038	0.041	0.131	0.052	0.074	0.018	0.114
.097	-0.111	-0.100	0.013	0.019	0.085	-0.006	-0.098	0.024	-0.065	-0.054	-0.077	-0.077	0.034	-0.095
.085	0.083	0.145	0.117	-0.044	-0.121	0.045	0.392	0.004	0.106	0.081	0.125	0.114	0.066	0.145
.092	0.095	0.119	0.124	0.005	-0.052	0.052	0.305	0.028	0.079	0.088	0.081	0.104	0.062	0.127
.047	-0.012	0.002	0.021	0.002	-0.013	0.029	0.035	0.012	-0.028	-0.016	-0.027	-0.017	0.053	-0.024
.073	0.130	0.128	0.046	-0.034	-0.153	0.078	0.080	-0.009	0.215	0.162	0.201	0.161	-0.019	0.250
1.000	0.109	0.087	0.069	0.004	-0.076	0.011	0.050	0.002	0.067	0.116	0.048	0.067	-0.051	0.111
(Q62)	1.000	0.482	0.037	-0.064	-0.182	0.089	0.053	-0.015	0.129	0.135	0.166	0.185	0.025	0.217
(Q61)		1.000	0.132	-0.048	-0.256	0.049	0.119	-0.016	0.202	0.143	0.219	0.252	0.104	0.28

User's Level · · · · · · · · · · 1/2(Q49+Q50)1.000   0.025   -0.038   0.155   -0.050   0.027   0.084   0.205   0.143   0.190   0.333   0.23

Task Direction · 1/2(Q2+Q7)1.000   0.024   0.092   0.074   0.038   -0.046   -0.014   -0.078   0.002   -0.026   -0.03

Kind and Class of Task · 1/2(Q8+Q9)1.000   -0.000   -0.197   0.162   -0.192   -0.045   -0.202   -0.216   -0.003   -0.215

Form of Task Output · 1/2(Q5+Q6)1.000   0.013   0.076   0.137   0.118   0.065   0.084   0.030   0.14

Task Time · (Q3xQ4)1.000   -0.045   0.070   0.023   0.089   0.090   0.014   0.09

User - Task Flexibility · (F)* 1.000   -0.011   0.078   -0.008   -0.016   0.023   0.02

Use of Company TIC · (Q33xQ35)1.000   0.254   0.362   0.330   0.007   0.63

Use of Specialized Information Centers · 1/2(Q40+Q41)1.000   0.249   0.331   0.089   0.72

Use of Specialized Information Services · 1/2(Q38+Q44)1.000   0.420   0.031   0.66

Use of TAB and DDC · 1/2(Q37+Q39)1.000   -0.003   0.77

User's Experience · 1/2(Q51+Q52)1.000   0.04

Utilization Effort · (E)**1.00

Utilization Problems ·

Location of and Why Used First Source for Information ·

Location of and Acquisition from First Source for Information ·

Desired Content of Information Media ·

Actual Content of Information Media ·

Desired Form of Information Media ·

Actual Form of Information Media ·

Difficulty in Acquisition and Use of Search for Information ·

Inadequacy of Search and Acquisition Process ·

Contribution of Information to Task ·

	$\frac{Q61+Q62}{2}$	r**	p***	$\frac{Q14+Q15}{2}$	$\frac{Q14+Q17}{2}$	$\frac{Q22+Q25}{2}$	$\frac{Q21+Q24}{2}$	$\frac{Q20+Q27}{2}$	$\frac{Q18+Q26}{2}$	$\frac{Q61+Q62}{2}$	r****	$\frac{Q30+Q31}{2}$	QUESTION
	0.666	0.112	-0.018	-0.008	0.029	0.022	0.023	0.024	0.033	0.032	-0.024	0.045	Q48
	-0.005	1.333	0.176	0.023	-0.051	0.073	0.046	0.057	0.126	0.178	0.064	-0.045	Q60A
	-0.111	0.168	0.084	0.019	-0.020	0.027	0.005	0.025	0.033	0.115	0.012	-0.040	Q50C
	-0.698	0.019	0.068	0.011	-0.037	-0.007	-0.019	0.012	0.013	0.051	0.034	-0.061	Q50B
	0.842	0.086	-0.014	0.005	-0.009	0.029	0.019	0.024	0.029	0.096	-0.303	0.059	Q51
	0.800	-0.016	-0.037	0.019	0.079	-0.012	0.007	-0.012	-0.027	0.009	-0.021	0.026	Q52
	0.046	-0.335	-0.143	-0.010	0.082	-0.089	-0.065	-0.127	-0.134	-0.209	-0.379	0.009	Q55
	-0.110	0.083	-0.041	0.024	-0.001	-0.001	-0.004	0.001	-0.001	0.022	0.030	-0.033	Q56
	0.376	0.346	0.199	0.030	0.015	0.097	0.069	0.095	0.169	0.153	0.058	0.022	Q58
	0.222	0.098	0.051	0.026	0.065	0.040	0.032	-0.006	-0.005	0.024	0.028	0.015	Q49
	0.224	0.164	0.092	0.038	0.097	0.072	0.062	0.027	0.018	0.068	0.078	0.005	Q54
	-0.063	-0.101	-0.046	0.040	0.080	-0.030	-0.032	-0.021	-0.029	-0.117	-0.019	-0.006	Q2
	0.003	0.111	0.048	0.032	0.003	0.046	0.040	0.061	0.066	0.080	0.015	0.017	Q7
	0.001	-0.329	-0.162	-0.014	0.074	-0.084	-0.052	-0.128	-0.135	-0.234	-0.104	-0.018	Q9
	-0.005	-0.013	-0.067	-0.005	0.040	-0.038	-0.007	-0.020	-0.028	-0.142	-0.027	-0.002	Q8
	-0.105	0.016	-0.028	-0.026	-0.010	-0.025	-0.016	0.006	-0.001	0.027	0.036	-0.030	Q10
	0.004	0.086	0.036	0.034	0.019	0.053	0.069	0.028	0.054	0.090	-0.009	0.056	Q6
	0.038	0.119	0.065	0.012	-0.003	0.027	0.026	0.007	0.015	0.030	0.000	-0.012	Q5
	0.040	0.138	0.369	0.012	0.044	0.146	0.103	0.137	0.157	0.129	0.176	0.025	Q3
	-0.140	-0.048	-0.021	-0.019	-0.022	0.011	0.028	-0.015	-0.033	-0.009	-0.024	0.039	Q4
	0.084	0.218	0.045	0.085	0.004	0.099	0.068	0.085	0.095	0.358	0.015	0.026	Q63
	0.007	0.655	0.128	0.055	-0.025	0.055	0.045	0.115	0.159	0.185	0.062	-0.028	Q35
	0.082	0.651	0.173	0.102	0.041	0.071	0.029	0.113	0.114	0.166	0.081	-0.007	Q40
	0.048	0.427	0.104	0.090	0.021	0.048	0.012	0.085	0.102	0.051	0.070	-0.022	Q41
	-0.032	0.456	0.107	0.048	-0.002	0.062	0.024	0.122	0.128	0.124	0.016	0.005	Q38
	0.057	0.571	0.150	0.058	-0.033	0.074	0.043	0.124	0.146	0.201	0.078	-0.036	Q44
	-0.036	0.583	0.175	0.064	-0.013	0.055	0.013	0.115	0.118	0.171	0.045	-0.012	Q37
	0.012	0.716	0.249	0.071	-0.011	0.079	0.034	0.129	0.129	0.232	0.065	-0.016	Q39
	-0.016	0.230	0.566	0.017	0.008	0.050	0.071	0.058	0.064	0.110	0.050	0.024	Q42
	-0.024	0.171	0.759	0.001	-0.090	0.063	0.023	0.053	0.068	0.081	0.116	-0.021	Q45
	0.101	0.466	0.246	0.040	-0.026	0.153	0.131	0.180	0.210	0.378	0.128	0.021	Q50
	0.061	-0.017	0.013	0.051	0.049	-0.022	-0.018	0.012	0.005	-0.021	-0.063	0.006	Q28
	-0.060	0.017	-0.019	-0.003	-0.015	-0.011	-0.017	0.037	0.038	0.051	0.012	0.011	Q29
	0.021	0.112	0.046	0.062	-0.011	0.518	0.489	0.154	0.175	0.086	0.023	0.061	Q25
	0.000	0.063	0.072	0.076	-0.091	0.832	0.640	0.349	0.363	0.061	0.069	0.032	Q22
	0.035	0.074	0.019	0.032	0.055	0.410	0.661	0.087	0.109	0.058	-0.063	0.121	Q24
	-0.007	0.006	0.031	0.070	-0.082	0.693	0.782	0.322	0.342	-0.003	-0.005	0.056	Q21
	-0.014	0.123	0.047	0.054	0.027	0.193	0.147	0.542	0.463	0.079	0.063	-0.060	Q20
	-0.030	0.121	0.059	0.058	-0.034	0.264	0.219	0.603	0.568	0.056	0.012	-0.023	Q27
	-0.023	0.124	0.038	0.038	0.050	0.203	0.183	0.476	0.549	0.167	0.004	-0.032	Q18
	-0.030	0.118	0.053	0.052	-0.041	0.252	0.210	0.538	0.603	0.053	-0.015	-0.015	Q26
	-0.014	0.012	-0.001	-0.048	-0.066	0.056	0.050	0.040	0.062	-0.004	-0.014	-0.001	Q19
	0.006	0.079	-0.036	0.865	0.115	0.002	0.011	-0.051	-0.055	0.012	-0.021	-0.006	Q15
	0.018	0.114	0.053	0.601	0.598	0.184	0.126	0.188	0.190	0.095	0.112	-0.049	Q14
	0.034	-0.095	-0.112	-0.001	0.754	-0.246	-0.137	-0.317	-0.327	-0.123	0.227	0.077	Q17
	0.066	0.146	0.129	0.056	-0.038	0.213	0.151	0.194	0.221	0.126	0.341	-0.027	Q13
	0.062	0.127	0.129	0.105	-0.025	0.252	0.165	0.204	0.230	0.121	0.172	0.019	Q12
	0.053	-0.029	0.008	-0.030	0.030	0.059	0.118	-0.006	0.008	-0.007	-0.109	1.000	Q30
	-0.019	0.252	0.120	0.098	-0.116	0.280	0.214	0.416	0.463	0.150	0.030	-0.038	Q23
	-0.051	0.111	0.126	-0.007	-0.033	0.092	0.043	0.389	0.085	0.116	0.642	-0.047	Q32
	0.025	0.217	0.103	0.053	-0.043	0.081	0.028	0.121	0.119	0.906	0.055	-0.012	Q62
	0.104	0.284	0.154	0.044	-0.016	0.086	0.031	0.121	0.124	0.807	0.084	0.002	Q61
	0.333	0.231	0.129	0.032	0.053	0.074	0.054	0.040	0.048	0.088	0.047	0.021	1/2(Q49+Q58)
	-0.026	-0.038	-0.019	0.050	0.071	-0.004	-0.009	0.009	0.004	-0.066	-0.010	0.002	1/2(Q2+Q7)
	-0.003	-0.219	-0.148	0.012	0.074	-0.019	-0.038	-0.055	-0.105	-0.246	-0.084	-0.013	1/2(Q8+Q9)
	0.050	0.144	0.071	0.033	0.011	0.056	0.066	0.024	0.048	0.083	-0.006	0.029	1/2(Q5+Q6)
	0.014	0.091	0.054	0.011	-0.045	0.130	0.109	0.114	0.135	0.094	0.124	0.035	Q3xQ4
	0.023	0.022	0.028	-0.019	0.045	0.007	0.017	0.010	0.005	-0.018	0.002	0.012	F*
	0.007	0.633	0.128	0.055	-0.025	0.063	0.045	0.115	0.139	0.185	0.062	-0.028	Q33xQ35
	0.089	0.725	0.189	0.123	0.043	0.063	0.030	0.130	0.139	0.160	0.097	-0.016	1/2(Q40+Q41)
	0.031	0.665	0.167	0.068	-0.028	0.091	0.045	0.155	0.175	0.217	0.070	-0.027	1/2(Q38+Q44)
	-0.003	0.779	0.261	0.080	-0.014	0.085	0.032	0.144	0.145	0.246	0.068	-0.017	1/2(Q37+Q39)
1/2(Q52) 1.000		0.047	-0.030	0.014	0.040	0.012	0.016	0.009	-0.003	0.067	-0.014	0.053	1/2(Q51+Q52)
(E)** 1.000			0.274	0.121	-0.001	0.112	0.051	0.191	0.207	0.284	0.107	-0.029	E**
(P)*** 1.000				-0.002	-0.054	0.082	0.035	0.086	0.097	0.144	0.112	0.008	P***
1/2(Q14+Q15) 1.000					0.395	0.095	0.073	0.054	0.052	0.057	0.040	-0.030	1/2(Q14+Q15)
1/2(Q14+Q17) 1.000						-0.078	-0.027	-0.130	-0.137	-0.036	0.256	0.030	1/2(Q14+Q17)
1/2(Q22+Q25) 1.000							0.777	0.361	0.384	0.096	0.067	0.059	1/2(Q22+Q25)
1/2(Q21+Q24) 1.000								0.257	0.325	0.034	-0.04?	0.118	1/2(Q21+Q24)
1/2(Q20+Q27) 1.000									0.867	0.139	0.028	-0.006	1/2(Q20+Q27)
1/2(Q18+Q26) 1.000										0.140	0.018	0.008	1/2(Q18+Q26)
1/2(Q61+Q62) 1.000											0.077	-0.007	1/2(Q61+Q62)
(I)**** 1.000												-0.149	P****
1/2(Q30+Q31) 1.000													1/2(Q30+Q31)

Figure 4-1. (Cont)

5. STEPWISE REGRESSION RELATIONSHIPS

5.1 INTERPRETATION

See Appendix 15 of Volume II, Reference 5 for a description of BMD 02R, the computer program employed for the stepwise regression analysis, and Reference 6 for a discussion of stepwise regression analysis.

Special summary indices have been used in the regression analyses. The defining equations of these are given below:

$$F = \frac{1}{2}(|Q9 - Q55| + |Q10 - Q56|)$$

$$I = \frac{1}{6}(|Q16 - Q28| + |\frac{1}{2}(Q22 + Q25) - \frac{1}{2}(Q21 + Q24)|$$

$$+ |\frac{1}{2}(Q20 + Q27) - \frac{1}{2}(Q18 + Q26)|$$

$$+ (1 - Q17) + |Q13 - Q12| + Q32)$$

$$E = \frac{1}{4}(Q33 \times Q35 + \frac{1}{2}(Q40 + Q41) + \frac{1}{2}(Q38 + Q44) + \frac{1}{2}(Q37 + Q39))$$

$$P = \frac{1}{2}(Q42 \times Q43 + Q45 \times Q46)$$

Four regression analysis computer runs, containing 39 stepwise regression analyses, appear in this section. The composition of these computer runs was determined from the linear models in the general structure. A list of runs appears in Section 4.2. Each stepwise regression analysis begins with the words Sub-Problem (1, 2, ...) and is followed by 5 indented terms which identify 5 limits established by North American Aviation, Inc. for this analysis. The example chosen to illustrate the interpretation of a stepwise regression analysis is Sub-Problem 6, Figure 5-1. The intrepretation follows:

① Sub-Problem, 6: Indicates the sixth Linear Model estimated by stepwise regression analysis in the given computer run.

② Dependent Variable, 27: Number 27 is the number assigned in this run to 1/2(Q22 + Q25), which is abbreviated in the computer printout as "22 + 25." It indicates that 1/2(Q22 + Q25) is the Dependent Variable for the regression analysis in Sub-Problem 6.

③ Maximum Number of Steps, 64: Signifies that 64 is the maximum number of stepwise regression analysis steps which may be used for Sub-Problem 6.

JUB-PROBLEM   6
DEPENDENT VARIABLE   1/2(Q22+Q25)
MAXIMUM NUMBER OF STEPS   64
F-LEVEL FOR INCLUSION   0.000000
F-LEVEL FOR DELETION   0.000000
TOLERANCE LEVEL   0.001000

STEP NUMBER   1
VARIABLE ENTERED   18

MULTIPLE R   0.4416
STD. ERROR OF EST.   0.2580

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	66.193	66.193	994.755
RESIDUAL	4107	273.290	0.067	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT)	0.29727		
5+6 18	0.49088	0.01556	994.7552

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10	1	0.19099	0.9081	155.4305
Q32	2	0.10396	0.9933	44.8591
Q55	3	0.02186	0.9241	1.9627
Q56	4	0.18986	0.9164	153.5492
Q12	5	0.24071	0.9759	252.5308
Q13	6	0.20820	0.9799	186.0522
Q14	7	0.21153	0.9579	192.3264
Q15	8	0.09068	0.9409	34.0444
Q17	9	-0.01759	0.8568	1.5769
Q16	10	0.11410	0.8667	54.1600
Q23	11	0.26940	0.9451	321.3281
Q26	12	0.31194	0.9055	442.6075
Q27	13	0.33165	0.9035	507.4501
Q28	14	0.07851	0.9004	25.3355
Q29	15	0.19916	0.9130	169.5951

Figure 5-1. Example of Stepwise Regression Analysis Printout

④   F-Level For Inclusion, 0.000000: The zero value indicates that all
      Independent Variables in the Model for 1/2(Q22 + Q25) are to be
      selected for inclusion in it, even if their F-To Enter is small. See
      ⟨27⟩ below.

⑤   F-Level For Deletion, 0.000000: The zero value indicates that no
      Independent Variable selected for inclusion in the Model is to be
      deleted from it, even if its F-To Remove is small. See ⟨22⟩ below.

⑥   Tolerance Level, 0.001000:   There is a computer test which determines
      whether an Independent Variable has a Tolerance greater than or
      equal to 0.001000. See ⟨26⟩ below.

⑦   Step Number, 1: Indicates the computer selection of the first (and most
      significant) Independent Variable. There are nine Step Numbers in
      this example, each selecting an additional Independent Variable for
      inclusion in the Linear Model for Sub-Problem 6. A Summary Table,
      located at the end of Step Number 9, lists the Number of the
      Independent Variable selected for inclusion in the Model at each step
      and additional information.

⑧   Variable Entered, 18: Number 18 is the number assigned in this run to
      1/2(Q25 + Q6). It indicates that 1/2(Q5 + Q6) has been selected for
      inclusion in the Model at this step.

⑨   Multiple R: Denotes the Multiple Correlation Coefficient. It measure the
      degree of linear relationship between the Dependent Variable and the
      Model at this step.

⑩   Standard Error of Estimate: A measure of the amount of variation in the
      Dependent Variable which is unexplained by the variation of the
      Independent Variables included in the Model at this step.

⟨11⟩   Analysis of Variance: An analysis of the variation which is explained by,
      and that which is residual to, the Model at this step. See ⟨12⟩,
      ⟨13⟩, ⟨14⟩, ⟨15⟩, ⟨16⟩ and ⟨17⟩ below.

⟨12⟩   Regression: Identifies the line of information that contains the variation
      which is explained by the Model at this step.

⟨13⟩   Residual: Identifies the line of information that contains the variation
      which is residual to, or unexplained by, the Model at this step.

⟨14⟩   DF: Denotes Degrees of Freedom. For a regression analysis, the DF is
      the size of the sample minus the number of Independent Variables in
      the Model at this step minus one. The value 1 under DF means that
      1 Degree of Freedom was used when the first Independent Variable
      was selected for inclusion in Model. Adding 1 to the sum of 1 and
      4107 yields 4109, which is the sample size for this regression
      analysis. It is not 5359, because any case with a blank answer for
      any question considered in this computer run is automatically
      eliminated from the sample.

⟨15⟩ Sum of Squares: In the Regression row, this is the sum of the squares of
the difference between the Dependent Variable mean and the Model
estimate of the Dependent Variable at this step. It is the sum of
the squares cf the unexplained variation.

In the Residual row, this is the sum of the squares of the difference
between the Model estimate of the Dependent Variable at this step.
It is the sum of the squares of the unexplained variation.

⟨16⟩ Mean Square: In the Regression and Residual rows, this is the ratio cf
the appropriate Sum of Squares and Its Degrees of Freedom.

⟨17⟩ F-Ratio: The ratio of the Regression Mean Square and the Residual
Mean Square. It measures the ability of the Model at this step to
predict the Dependent Variable. In the example, the value 9696.902
(located under both F-Ratio and F-To Remove in ⟨22⟩ below) indi-
cates that 1/2(Q5 + Q6) is an excellent predictor of 1/2(Q22 + Q25).

⟨18⟩ Variables in Equation: A heading used to identify the Independent Variables
selected for inclusion in the Model at this step. It encompasses

Variable ⟨19⟩, Coefficient ⟨20⟩, Std. Error ⟨21⟩, and F-To

Remove ⟨22⟩.

⟨19⟩ Variable: Contains the constant term and Independent Variables selected
for inclusion in the Model at this step. They are identified by
both the abbreviated form of notation for questions in the Interview
Guide (e.g., 5 + 6 for 1/2(Q5 + Q6)), and the Number assigned to
that Independent Variable in this run (e.g., 18).

⟨20⟩ Coefficient: Denotes the Regression Coefficient. This column contains
the estimates of the constant term and multipliers for the
Independent Variables selected for inclusion in the Model at this
step.

⟨21⟩ Std. Error: Denotes the Standard Error of the Regression Coefficient.
This column contains the standard deviations of the Coefficient
estimates.

⟨22⟩ F-To Remove: Measures the relative amount of variation in the
Dependent Variable which would not be explained, if that Independent
Variable were removed from the Model at this step.

⟨23⟩ Variables Not In Equation: Denotes Independent Variables not selected
for inclusion in the Model at this step. However, information is
presented concerning these variables. It includes Variable ⟨24⟩,

Partial Corr. ⟨25⟩, Tolerance ⟨26⟩, and F-To Enter ⟨27⟩.

⟨24⟩ Variable: Contains Independent Variables not selected for inclusion in
the Model at this step. They are identified as described under
⟨19⟩ above.

⟨25⟩   **Partial Corr.**: Denotes Partial Correlation Coefficient. This column contains the corresponding measures of the degree of linear relationship between that Independent Variable and the residual formed by the Dependent Variable minus the Model at this step.

⟨26⟩   **Tolerance**: Contains the corresponding values for one minus the square of the measure for the degree of linear relationship between that Independent Variable and the Model at this step. It measures in an indirect manner, what Partial Corr. measures in a direct manner.

⟨27⟩   **F-To Enter**: Measures the relative amount of variation in the Dependent Variable which would be explained, if that Independent Variable were now to be selected for inclusion in the Model.

5.2 INDEX

Tables are in sequence by the question number of the dependent variable. When the dependent variable is a combination of questions, the lowest-numbered question determines its place in the sequence. For convenience, these dependent variables are listed in the index for each question in the combination.

Questions	Description	Table	Page
Q13	Desired Acquisition Time for Information	5-9	5-39
Q13 in I	Desired Acquisition Time for Information as part of Inadequacy Index	5-8	5-33
Q14	Location of First Source for Information	5-10	5-46
Q16	Desired Class of Information	5-11	5-54
Q16 in I	Desired Class of Information as part of Inadequacy Index	5-8	5-33
Q17	Acquisition from First Source	5-12	5-59
Q17 in I	Acquisition from First Source as part of Inadequacy Index	5-8	5-33
1/2(Q18+Q16)	Actual Composition of Transporting Medium plus Actual Layout of Transporting Medium	5-13	5-67
Q18 in I	Actual Composition of Transporting Medium as part of Inadequacy Index	5-8	5-33
1/2(Q20+Q27)	Desired Composition of Transporting Medium plus Desired Layout of Transporting Medium	5-14	5-71
Q20 in I	Desired Composition of Transporting Medium as part of Inadequacy Index	5-8	5-33
1/2(Q21+Q24)	Actual Volume of Transporting Medium plus Actual Detail of Transporting Medium	5-15	5-75
Q21 in I	Actual Volume of Transporting Medium as part of Inadequacy Index	5-8	5-33
1/2(Q22+Q25)	Desired Volume of Transporting Medium plus Desired Detail of Transporting Medium	5-16	5-79
Q22 in I	Desired Volume of Transporting Medium as part of Inadequacy Index	5-8	5-33
Q23	Usefulness of Title Listings or Abstracts	5-17	5-85
1/2(Q24+Q21)	Actual Detail of Transporting Medium plus Actual Volume of Transporting Medium	5-15	5-75
Q24 in I	Actual Detail of Transporting Medium as part of Inadequacy Index	5-8	5-33
1/2(Q25+Q22)	Desired Detail of Transporting Medium plus Desired Volume of Transporting Medium	5-16	5-79

Questions	Description	Table	Page
Q38 in E	Use of STAR as part of Effort Index	5-23	5-120
Q39	Use of DDC	5-26	5-129
Q39 in E	Use of DDC as part of Effort Index	5-23	5-120
1/2(Q40+Q41)	Use of DOD Specialized Information Centers plus Use of Other Specialized Information Centers	5-27	5-133
Q40 in E	Use of DOD Specialized Information Centers as part of Effort Index	5-23	5-120
1/2(Q41+Q40)	Use of Other Specialized Information Centers plus Use of DOD Specialized Information Centers	5-27	5-133
Q40 in E	Use of DOD Specialized Information Centers as part of Effort Index	5-23	5-120
Q41+Q40	Use of Other Specialized Information Centers plus Use of DOD Specialized Information Centers	5-27	5-133
Q41 in E	Use of Other Specialized Information Centers as part of Effort Index	5-23	5-120
Q42xQ43	Encounter of Restrictions times Nature of Restrictions	5-28	5-136
Q42 in P	Encounter of Restrictions as part of Problem Index	5-29	5-140
Q43xQ42	Nature of Restrictions times Encounter of Restrictions	5-28	5-136
Q43 in P	Nature of Restrictions as part of Problem Index	5-29	5-140
1/2(Q44+Q38)	Use of English Abstracts or Translations plus Use of STAR	5-25	5-126
Q45xQ46	Encounter of Difficulties times Nature of Difficulties	5-30	5-142
Q45 in P	Encounter of Difficulties as part of Problem Index	5-29	5-140
Q46xQ45	Nature of Difficulties times Encounter of Difficulties	5-30	5-142
Q46 in P	Nature of Difficulties as part of Problem Index	5-29	5-140
1/2(Q49+Q58)	Number of Personnel Supervised by User plus User's Equivalent GS Rating	5-31	5-146

Questions	Description	Table	Page
Q50A	User's Highest Degree	5-32	5-149
Q50C	Field of User's Highest Degree	5-33	5-150
1/2(Q51+Q52)	Job Experience of User plus Company Experience of User	5-34	5-151
1/2(Q52+Q51)	Company Experience of User plus Job Experience of User	5-34	5-151
Q55	Kind of Work Position	5-35	5-152
Q55 in F	Kind of Work Position as part of Flexibility Index	5-5	5-21
Q56	Field of Work Position	5-36	5-154
Q56 in F	Field of Work Position as part of Flexibility Index	5-5	5-21
1/2(Q58+Q49)	User's Equivalent GS Rating plus Number of Personnel Supervised by User	5-31	5-146
Q59	Interviewer's Assessment of User's Information Needs	5-37	5-156
1/2(Q61+Q62)	Interviewer's Assessment of Difficulty in Use of Information plus Interviewer's Assessment of Difficulty in Acquisition of Information	5-38	5-160
1/2(Q62+Q61)	Interviewer's Assessment of Difficulty in Acquisition of Information plus Interviewer's Assessment of Difficulty in Use of Information	5-38	5-160
Q63	Interviewer's Assessment of Task Creativity	5-39	5-167
E	Effort Index	5-23	5-120
F	Flexibility Index	5-5	5-21
I	Inadequacy Index	5-8	5-33
P	Problem Index	5-29	5-146

5.3 RELATIONSHIPS

Table 5-1.   Task Initiator plus Task Recipient

```
SUB-PROBLEM   7
DEPENDENT VARIABLE        4(Q3447)
MAXIMUM NUMBER OF STEPS      20
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER    1
VARIABLE ENTERED    3

MULTIPLE R            0.0476
STD. ERROR OF EST.   0.1786
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	0.108	0.108	3.378
RESIDUAL	1463	47.369	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.45039)							
Q55 3	0.03370	0.01834	3.3703		Q10 1	0.00064	0.9735	0.0006
					Q48 2	-0.00056	0.9969	0.0005
					Q56 4	-0.00510	0.9625	0.0385
					Q63 5	-0.00648	0.9321	0.0623
					Q50A 6	-0.05424	0.8472	4.3792
					Q50C 7	-0.00400	0.9564	0.0238
					3X4 9	0.08352	0.9643	10.4239
					5+6 10	0.09149	0.9999	12.5252
					8+9 11	-0.00918	0.6898	0.1252
					49+58 12	0.01807	0.9978	0.4846
					51+52 13	-0.03713	0.9978	2.0487
					(F) 14	0.03394	0.9850	1.7114

```
STEP NUMBER    2
VARIABLE ENTERED   12

MULTIPLE R            0.0509
STD. ERROR OF EST.   0.1786
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	0.123	0.062	1.931
RESIDUAL	1484	47.353	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.44454)							
Q55 3	0.03430	0.01836	3.4909		Q10 1	0.00277	0.9602	0.0114
49+58 12	0.02053	0.02949	0.4846		Q48 2	-0.00732	0.8758	0.0794
					Q56 4	-0.00285	0.9473	0.0120
					Q63 5	-0.00921	0.9123	0.1259
					Q50A 6	-0.06039	0.7979	5.4290
					Q50C 7	-0.00533	0.9527	0.0391
					3X4 9	0.08465	0.9614	10.7021
					5+6 10	0.08975	0.9729	12.0428
					8+9 11	-0.00919	0.6898	0.1255
					51+52 13	-0.04573	0.8879	3.1074
					(F) 14	0.03344	0.9842	1.6601

Table 5-1. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   4

MULTIPLE R   0.0510
STD. ERROR OF EST.   0.1797

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	0.124	0.041	1.290
RESIDUAL	1483	47.593	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.46616				Q1C	1	0.00647	0.5102	0.0620
Q55 3	0.03349	0.01875	3.2483		Q4R	2	-0.00765	0.8667	0.0867
Q56 4	-0.00206	0.01804	0.0120		Q43	5	-0.00910	0.9122	0.1251
49+50 12	0.02012	0.02974	0.4578		Q50A	6	-0.06033	0.7968	5.4138
					Q50C	7	-0.00448	0.8648	0.0297
					3Y4	9	0.08488	0.9591	10.7554
					S46	10	0.08996	0.9619	12.0911
					R+9	11	-0.00952	0.6830	0.1345
					51+52 13		-0.04603	0.8938	3.1462
					(F)	14	0.03332	0.9754	1.6472

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q55	3	0.0476	0.0023	0.0023	3.3783	1
2	49+50	12	0.0509	0.0026	0.0003	0.4846	2
3	Q56	4	0.0510	0.0026	0.0000	0.0120	3

Table 5-2.   Elapsed Time on Task times Percentage of Time on Task

```
SUB-PROBLEM  11
DEPENDENT VARIABLE       03.04
MAXIMUM NUMBER OF STEPS    28
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER   1
VARIABLE ENTERED    11

MULTIPLE R          0.2041
STD. ERROR OF EST.  0.1745

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   1         1.965          1.965        64.553
        RESIDUAL   1485        45.202         0.030
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.20325)							
8+9 11	-0.17879	0.02225	64.5530		Q10 1	0.01601	0.9637	0.3805
					Q48 2	0.01740	0.9978	0.2282
					Q55 3	-0.09770	0.6998	12.8625
					Q56 4	0.05298	0.9645	4.1765
					Q63 5	0.14620	0.9183	32.4103
					Q50A 6	0.09447	0.9309	13.3621
					Q50C 7	0.04584	0.9840	3.1281
					2+7 8	0.07844	0.9996	9.1868
					5+6 10	0.01569	0.9999	0.3655
					49+58 12	-0.05108	0.9993	3.8818
					51+52 13	0.01306	0.9999	0.2531
					(F) 14	-0.00686	0.9770	0.1166

```
STEP NUMBER   2
VARIABLE ENTERED    3

MULTIPLE R          0.2234
STD. ERROR OF EST.  0.1738

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   2         2.353          1.177        38.966
        RESIDUAL   1484        44.813         0.030
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.21059)							
Q55 3	-0.07703	0.02148	12.8625		Q10 1	0.00878	0.9627	0.1144
8+9 11	-0.12548	0.02669	22.1118		Q48 2	0.01580	0.9966	0.3705
					Q56 4	0.04333	0.9531	2.7897
					Q63 5	0.13607	0.9034	27.9752
					Q50A 6	0.06980	0.8443	7.2596
					Q50C 7	0.03085	0.9562	1.4129
					2+7 8	0.08302	0.9976	10.2923
					5+6 10	0.01661	0.9999	0.4095
					49+58 12	-0.05500	0.9978	4.4996
					51+52 13	0.01763	0.9975	0.4612
					(F) 14	-0.00460	0.9749	0.0314

Table 5-2.   (Continued)

STEP NUMBER   3
VARIABLE ENTERED   8

MULTIPLE R   0.2376
STD. ERROR OF EST. 0.1732

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	2.667	0.887	29.570
RESIDUAL	1483	44.594	0.030	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.17402)			:				
055 3	-0.08011	0.02143	13.9683	:	Q10 1	0.00884	0.9627	0.1159
2+7 8	0.08075	0.02517	10.2923	:	Q48 2	0.01589	0.9966	0.3744
8+9 11	-0.12470	0.02660	21.9713	:	056 4	0.04398	0.9531	2.8727
				:	063 5	0.13723	0.9034	28.4445
				:	050A 6	0.07472	0.8417	8.3210
				:	050C 7	0.03130	0.9562	1.4534
				:	5+6 10	0.00909	0.9915	0.1224
				:	49+58 12	-0.05670	0.9975	4.7805
				:	51+52 13	0.02081	0.9961	0.6474
				:	(F) 14	-0.00754	0.9737	0.0843

STEP NUMBER   4
VARIABLE ENTERED   12

MULTIPLE R   0.2439
STD. ERROR OF EST. 0.1730

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	2.805	0.701	23.430
RESIDUAL	1482	44.341	0.030	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.19135)			:				
055 3	-0.08199	0.02142	14.6441	:	Q10 1	0.00221	0.9495	0.0073
2+7 8	0.08175	0.02514	10.5706	:	Q48 2	0.03811	0.8754	2.1546
8+9 11	-0.12467	0.02657	22.0146	:	056 4	0.03718	0.9379	2.0503
49+58 12	-0.06267	0.02857	4.7805	:	063 5	0.14751	0.8835	32.9425
				:	050A 6	0.09139	0.7920	12.4737
				:	050C 7	0.03494	0.9525	1.8104
				:	5+6 10	0.01863	0.9650	0.5141
				:	51+52 13	0.04216	0.8957	2.6376
				:	(F) 14	-0.00595	0.9729	0.0525

STEP NUMBER   5
VARIABLE ENTERED   4

MULTIPLE R   0.2465
STD. ERROR OF EST. 0.1730

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	2.867	0.573	19.167
RESIDUAL	1481	44.300	0.030	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.18979)			:				
055 3	-0.07846	0.02156	13.2458	:	Q10 1	-0.03163	0.5088	1.4795
056 4	0.02624	0.01932	2.0503	:	Q48 2	0.04209	0.8665	2.6268
2+7 8	0.08198	0.02513	10.6131	:	063 5	0.14790	0.8834	33.0072
8+9 11	-0.12986	0.02669	20.5216	:	050A 6	0.09032	0.7912	12.1720
49+58 12	-0.05726	0.02869	3.9558	:	050C 7	0.02483	0.8665	0.9131
				:	5+6 10	0.02275	0.9540	0.7663
				:	51+52 13	0.04492	0.8813	2.9924
				:	(F) 14	-0.00279	0.9658	0.0116

Table 5-2. (Continued)

STEP NUMBER 6
VARIABLE ENTERED 1

MULTIPLE R   0.2484
STD. ERROR OF EST.   0.1729

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	2.911	0.485	16.224
RESIDUAL	1480	44.256	0.030	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.17761)								
Q10 1	-0.03073	0.02526	1.4795		Q48	2	0.04196	0.8665	2.6084
Q55 3	-0.07866	0.02155	13.3178		Q63	5	0.14720	0.8828	32.7587
Q56 4	0.04697	0.02503	3.5232		Q50A	6	0.08918	0.7899	11.8579
2+7 8	0.08207	0.02513	10.6636		Q50C	7	0.02670	0.8614	1.0618
8+9 11	-0.12256	0.02672	21.0301		5+6	10	0.02021	0.9475	0.6044
49+58 12	-0.05875	0.02881	4.1577		51+52	13	0.04415	0.8800	2.8991
					(F)	14	-0.00184	0.9450	0.0050

STEP NUMBER 7
VARIABLE ENTERED 10

MULTIPLE R   0.2492
STD. ERROR OF EST.   0.1729

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	2.929	0.418	13.989
RESIDUAL	1479	44.238	0.030	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.16413)								
Q10 1	-0.02909	0.02535	1.3170		Q48	2	0.04188	0.8665	2.5910
Q55 3	-0.07864	0.02156	13.3077		Q63	5	0.14621	0.8789	32.2853
Q56 4	0.04741	0.02504	3.5860		Q50A	6	0.08795	0.7857	11.5230
2+7 8	0.08029	0.02524	10.1197		Q50C	7	0.02663	0.8614	1.0487
5+6 10	0.01955	0.02515	0.6044		51+52	13	0.04479	0.8800	2.9711
8+9 11	-0.12229	0.02673	20.9279		(F)	14	-0.00287	0.9625	0.0122
49+58 12	-0.06207	0.02913	4.5405						

F LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	8+9	11	0.2041	0.0417	0.0417	64.5530	1
2	Q55	3	0.2234	0.0499	0.0082	12.8625	2
3	2+7	8	0.2376	0.0564	0.0065	10.2923	3
4	49+58	12	0.2439	0.0595	0.0030	4.7805	4
5	Q56	4	0.2465	0.0608	0.0013	2.0503	5
6	Q10	1	0.2484	0.0617	0.0009	1.4795	6
7	5+6	10	0.2492	0.0621	0.0004	0.6044	7

Table 5-3.   Type of Task plus Formality of Task

```
SUB-PROBLEM   10
DEPENDENT VARIABLE        X(Q5+Q6)
MAXIMUM NUMBER OF STEPS       28
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED    12
```

```
MULTIPLE R            0.1635
STD. ERROR OF EST.    0.1808
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	1.334	1.334	40.802
RESIDUAL	1485	48.563	0.033	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.64996)								
49+58 12	0.19051	0.02982	40.8020		Q10		-0.13321	0.9885	26.8109
					Q48	2	0.01616	0.8809	0.3875
					Q55	3	0.01982	0.9978	0.5833
					Q56	4	-0.10818	0.9870	17.5735
					Q63	5	0.05944	0.9766	5.2611
					Q50A	6	0.05337	0.9625	4.2385
					Q50C	7	-0.03344	0.9951	1.6616
					2+7	8	0.09059	0.9998	12.2787
					3X4	9	0.02143	0.9980	0.6820
					8+9	11	0.01199	0.9993	0.2132
					51+52 13		-0.02272	0.8918	0.7662
					(F)	14	0.06127	0.9995	5.5928

```
STEP NUMBER    2
VARIABLE ENTERED    1
```

```
MULTIPLE R            0.2098
STD. ERROR OF EST.    0.1793
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	2.196	1.099	34.161
RESIDUAL	1484	47.702	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.71847)								
Q10 1	-0.09730	0.01879	26.8109		Q48	2	0.00484	0.8745	0.0348
49+58 12	0.17399	0.02974	34.2257		Q55	3	-0.00277	0.9693	0.0113
					Q56	4	-0.02190	0.5103	0.7116
					Q63	5	0.06525	0.9752	6.3401
					Q50A	6	0.06278	0.9383	5.8672
					Q50C	7	0.00331	0.9199	0.0163
					2+7	8	0.09067	0.9997	12.2927
					3X4	9	0.02798	0.9958	1.1621
					8+9	11	-0.01242	0.9666	0.2288
					51+52 13		-0.03299	0.8868	1.6155
					(F)	14	0.05304	0.9951	4.1840

Table 5-3. (Continued)

STEP NUMBER 3
VARIABLE ENTERED 8

MULTIPLE R 0.2278
STD. ERROR OF EST. 0.1786

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	2.588	0.863	27.045
RESIDUAL	1483	47.309	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.67656)							
010 1	-0.09494	0.01872	26.8153		048 2	0.00523	0.8745	0.0406
2+7 8	0.09050	0.02593	12.2927		055 3	-0.00717	0.9670	0.0763
49+58 12	0.17242	0.02963	33.8588		056 4	-0.02089	0.5103	0.6470
					063 5	0.06745	0.9747	6.7741
					050A 6	0.06999	0.9331	7.3924
					050C 7	0.00441	0.9198	0.0315
					3X4 9	0.02142	0.9903	0.6800
					8+9 11	-0.01417	0.9663	0.2977
					51+52 13	-0.02924	0.8852	1.2685
					(F) 14	0.04976	0.9936	3.6787

STEP NUMBER 4
VARIABLE ENTERED 4

MULTIPLE R 0.2287
STD. ERROR OF EST. 0.1786

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	2.609	0.652	20.441
RESIDUAL	1482	47.299	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.68089)							
010 1	-0.08238	0.02604	10.0122		048 2	0.00362	0.8692	0.0195
056 4	-0.02064	0.02566	0.6470		055 3	-0.00963	0.9538	0.1388
2+7 8	0.09064	0.02593	12.2198		063 5	0.06854	0.9725	6.9694
49+58 12	0.17111	0.02968	33.2371		050A 6	0.07226	0.9251	7.7732
					050C 7	0.00908	0.8813	0.1220
					3X4 9	0.02302	0.9849	0.7856
					8+9 11	-0.01622	0.9577	0.3897
					51+52 13	-0.03010	0.8838	1.3432
					(F) 14	0.04795	0.9846	3.4132

STEP NUMBER 5
VARIABLE ENTERED 11

MULTIPLE R 0.2292
STD. ERROR OF EST. 0.1787

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	2.621	0.524	16.424
RESIDUAL	1481	47.276	0.032	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.68887)							
010 1	-0.08347	0.02610	10.2382		048 2	0.00424	0.8680	0.0266
056 4	-0.02216	0.02578	0.7308		055 3	-0.00114	0.6783	0.0019
2+7 8	0.09093	0.02594	12.2878		063 5	0.06667	0.8963	6.6077
8+9 11	-0.01454	0.02329	0.3897		050A 6	0.07045	0.8672	7.3821
49+58 12	0.17015	0.02972	32.7676		050C 7	0.00809	0.8779	0.0970
					3X4 9	0.02023	0.9667	0.6059
					51+52 13	-0.03002	0.8838	1.3348
					(F) 14	0.05060	0.9662	3.7989

```
STEP NUMBER    6
VARIABLE ENTERED    3


MULTIPLE R             0.2292
STD. ERROR OF EST.    0.1787

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
       REGRESSION    6         2.421           0.437       13.678
       RESIDUAL    1480        47.276          0.032
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.68904							
010 1	-0.08343	0.02611	10.2229		048 2	0.00429	0.8465	0.0272
055 3	-0.00090	0.02228	0.0019		063 5	0.06704	0.8828	6.6764
056 4	-0.02125	0.02587	0.7397		050A 6	0.07365	0.7899	8.0236
2+7 8	0.09098	0.02597	12.7608		050C 7	0.00001	0.8414	0.0050
8+9 11	-0.01300	0.02762	0.2526		3X4 9	0.02021	0.9343	0.6044
49+50 12	0.17008	0.02978	32.6222		51+52 13	-0.03000	0.8804	1.3325
					(F) 14	0.05067	0.9450	3.8076

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

```
SUMMARY TABLE
```

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	49+50 12		0.1635	0.0267	0.0267	40.8020	1
2	010 1		0.2098	0.0440	0.0173	26.8109	2
3	2+7 8		0.2276	0.0519	0.0079	12.2427	3
4	056 4		0.2287	0.0523	0.0004	0.6470	4
5	8+9 11		0.2292	0.0525	0.0007	0.3897	5
6	055 3		0.2292	0.0525	0.0000	0.0019	6

Table 5-4.   Class of Task plus Kind of Task

```
SUB-SAMPLE    R
DEPENDENT VARIABLE        (Q8+Q9)
MAXIMUM NUMBER OF STEPS       28
F-LEVEL FOR INCLUSION      0.000000
F-LEVEL FOR DELETION       0.000000
TOLERANCE LEVEL            0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED    3

MULTIPLE R          0.5549
STD. ERROR OF EST.  0.1690

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
       REGRESSION    1        19.067          19.067      667.712
       RESIDUAL    1495        42.405          0.029
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.26929)			:				
Q55 3	0.44827	0.01735	667.7119	:	Q10 1	-0.10478	0.4735	16.4334
				:	Q49 2	0.01844	0.9969	0.5161
				:	Q56 4	-0.09873	0.9625	14.6491
				:	Q63 5	-0.17536	0.9321	47.0825
				:	Q50A 6	-0.05901	0.8472	5.1851
				:	Q50C 7	-0.01237	0.9564	0.2277
				:	2+7 8	-0.00919	0.9077	0.1252
				:	3+4 9	-0.12117	0.9443	22.1118
				:	5+6 10	0.00121	0.9999	0.0022
				:	49+58 12	0.00045	0.9978	0.0003
				:	51+52 13	-0.01701	0.9978	0.4255
				:	(F) 14	0.10137	0.9850	15.3910

```
STEP NUMBER    2
VARIABLE ENTERED    4

MULTIPLE R          0.5679
STD. ERROR OF EST.  0.1682

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
       REGRESSION    2        19.460          9.730       344.220
       RESIDUAL    1494        41.591          0.028
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.29867)			:				
Q55 3	0.43524	0.01760	611.4176	:	Q10 1	-0.05164	0.5111	3.9654
Q56 4	-0.06724	0.01759	14.6491	:	Q49 2	0.03503	0.9778	0.0376
				:	Q63 5	-0.17705	0.9320	47.9890
				:	Q50A 6	-0.05870	0.8472	5.1278
				:	Q50C 7	0.01739	0.8743	7.4487
				:	2+7 8	-0.00973	0.9077	0.1405
				:	3+4 9	-0.11650	0.9614	20.4055
				:	5+6 10	-0.01125	0.9843	0.1879
				:	49+58 12	-0.01212	0.9620	0.2179
				:	51+52 13	-0.02769	0.9868	1.1381
				:	(F) 14	0.09250	0.9757	12.8240

Table 5-4. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   12

MULTIPLE R   0.5632
STD. ERROR OF EST. 0.1683

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	19.486	6.495	229.432
RESIDUAL	1483	41.985	0.028	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.30255)		
Q55 3	0.43466	0.01765	605.3944
Q56 4	-0.06828	0.01774	14.8191
49+58 12	-0.01307	0.02800	0.2179

VARIABLES NOT IN EQUATION

VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10 1	-0.05219	0.5102	4.0484
Q68 2	0.00969	0.8667	0.1391
Q63 5	-0.17719	0.9122	44.0356
Q50A 6	-0.05748	0.7968	4.9135
Q50C 7	0.01876	0.8648	0.5216
2+7 8	-0.00952	0.9974	0.1344
3X4 9	-0.11723	0.9591	20.6515
5+6 10	-0.00953	0.9619	0.1347
51+52 13	-0.02513	0.8838	0.9361
(F) 14	0.09281	0.9754	12.8776

STEP NUMBER   4
VARIABLE ENTERED   8

MULTIPLE R   0.5631
STD. ERROR OF EST. 0.1683

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	19.490	4.873	172.007
RESIDUAL	1482	41.981	0.028	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.30655)		
Q55 3	0.43496	0.01768	605.5536
Q56 4	-0.06830	0.01774	14.8183
2+7 8	-0.00807	0.02446	0.1344
49+58 12	-0.01289	0.02802	0.2118

VARIABLES NOT IN EQUATION

VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10 1	-0.05214	0.5102	4.0366
Q68 2	0.00962	0.8666	0.1370
Q63 5	-0.17729	0.9121	48.0608
Q50A 6	-0.05817	0.7939	5.0280
Q50C 7	0.01872	0.8648	0.5189
3X4 9	-0.11685	0.9522	20.5016
5+6 10	-0.00871	0.9541	0.1125
51+52 13	-0.02559	0.8819	0.9706
(F) 14	0.09319	0.9743	12.9735

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q55 3		0.5569	0.3102	0.3102	667.7119	1
2	Q56 4		0.5629	0.3169	0.0067	14.6091	2
3	49+58 12		0.5630	0.3170	0.0001	0.2179	3
4	2+7 8		0.5631	0.3171	0.0001	0.1344	4

Table 5-5. Flexibility Index

```
SUB-PRORLM   13
DEPENDENT VARIABLE       F
MAXIMUM NUMRER OF STEPS      29
F-LFVEL FOR INCLUSION     C.000000
F-LFVEL FOR DELFTION      C.000000
TOLERANCE LEVEL           0.CC1000


STEP NUMBER    1
VARIABLE ENTERED    3

MULTIPLE R          0.1225
STD. ERROR OF EST.  0.1332

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
      REGRESSION     1        0.401          0.401      22.610
      RESIDUAL    1485       26.330          0.018
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.07218)			:				
Q55 3	0.06500	0.01367	22.6101	:	Q10 1	-0.04934	0.5735	3.6221
				:	Q48 2	0.02061	0.9969	0.6309
				:	Q56 4	-0.09738	0.9925	14.2059
				:	Q63 5	-0.03680	0.9321	2.0120
				:	Q50A 6	-0.02455	0.8472	0.8952
				:	Q50C 7	-0.05736	0.9564	4.8989
				:	2+7 8	0.03394	0.9977	1.7114
				:	3X4 9	-0.01682	0.9643	0.4200
				:	5+6 10	0.06319	0.9999	5.9488
				:	8+9 11	0.10132	0.5896	15.3910
				:	49+58 12	0.02878	0.9976	1.2299
				:	51+52 13	0.00130	0.9978	0.0025

```
STEP NUMBER    2
VARIABLE ENTERED    4

MULTIPLE R          0.1560
STD. ERROR OF EST.  0.1326

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
      REGRESSION     2        0.651          0.325      18.5C9
      RESIDUAL    1484       26.081          0.018
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11015)			:				
Q55 3	0.05488	0.01387	15.6491	:	Q10 1	0.02464	0.5111	0.9006
Q56 4	-0.05225	0.01386	14.2059	:	Q48 2	0.00722	0.9778	0.0774
				:	Q63 5	-0.03778	0.9320	2.1197
				:	Q50A 6	-0.02408	0.8472	0.8606
				:	Q50C 7	-0.03030	0.8743	1.3632
				:	2+7 8	0.03360	0.9977	1.6766
				:	3X4 9	-0.01156	0.9414	0.1982
				:	5+6 10	0.05169	0.9843	3.9722
				:	8+9 11	0.09259	0.6831	12.8240
				:	49+58 2	0.01674	0.9820	0.4157
				:	51+52 13	-0.00904	0.9868	0.1213

```
STEP NUMBER    3
VARIABLE ENTERED    7

MULTIPLE R          0.1588
STD. ERROR OF EST.  0.1326

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
      REGRESSION     3        0.675          0.225      12.796
      RESIDUAL    1483       26.057          0.018
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11542)			:				
Q55 3	0.05229	0.01405	13.8569	:	Q10 1	0.02632	0.5096	1.0277
Q56 4	-0.04730	0.01450	10.6418	:	Q48 2	0.00356	0.9632	0.0187
Q50C 7	-0.01403	0.01201	1.3632	:	Q63 5	-0.03695	0.9313	2.0265
				:	Q50A 6	-0.01001	0.6262	0.1486
				:	2+7 8	0.03354	0.9977	1.6690
				:	3X4 9	-0.01106	0.9611	0.1812
				:	5+6 10	0.05227	0.9840	4.0596
				:	8+9 11	0.09318	0.6829	12.9789
				:	49+58 12	0.02001	0.9714	0.5939
				:	51+52 13	-0.01223	0.9763	0.2216

Table 5-5. (Continued)

STEP NUMBER   4
VARIABLE ENTERED   12

MULTIPLE R   0.1601
STD. ERROR OF EST. 0.1326

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	0.685	0.171	9.743
RESIDUAL	1482	26.046	0.018	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.10992)			:				
Q55 3	0.05287	0.01407	14.1236	:	Q10 1	0.02731	0.5084	1.1057
Q56 4	-0.04559	0.01467	9.6610	:	Q48 2	-0.00378	0.8423	0.0212
Q50C 7	-0.01500	0.01208	1.5408	:	Q63 5	-0.04026	0.9120	2.4043
49+58 12	0.01710	0.02219	0.5939	:	Q50A 6	-0.01486	0.5950	0.3269
				:	2+7 8	0.03319	0.9974	1.6335
				:	3X4 9	-0.01007	0.9587	0.1501
				:	5+6 10	0.04984	0.9619	3.6879
				:	8+9 11	0.09348	0.6828	13.0569
				:	51+52 13	-0.02017	0.8652	0.6025

STEP NUMBER   5
VARIABLE ENTERED   6

MULTIPLE R   0.1607
STD. ERROR OF EST. 0.1326

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	0.691	0.138	7.856
RESIDUAL	1481	26.040	0.018	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11397)			:				
Q55 3	0.04981	0.01506	10.9459	:	Q10 1	0.02625	0.5054	1.0208
Q56 4	-0.04672	0.01480	9.9609	:	Q48 2	-0.00411	0.8419	0.0250
Q50A 6	-0.00942	0.01648	0.3269	:	Q63 5	-0.03893	0.9022	2.2464
Q50C 7	-0.01097	0.01398	0.6159	:	2+7 8	0.03227	0.9929	1.5429
49+58 12	0.02000	0.02276	0.7720	:	3X4 9	-0.00873	0.9505	0.1129
				:	5+6 10	0.05121	0.9556	3.8914
				:	8+9 11	0.09262	0.6787	12.8065
				:	51+52 13	-0.02199	0.8542	0.7158

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q55	3	0.1225	0.0150	0.0150	22.6101	1
2	Q56	4	0.1560	0.0243	0.0093	14.2059	2
3	Q50C	7	0.1588	0.0252	0.0009	1.3632	3
4	49+58	12	0.1601	0.0256	0.0004	0.5939	4
5	Q50A	6	0.1607	0.0258	0.0002	0.3269	5

FINISH CARD ENCOUNTERED
PROGRAM TERMINATED

Table 5-6. Field of Task

```
SUB-PROBLEM    9
DEPENDENT VARIABLE         Q10
MAXIMUM NUMBER OF STEPS     29
F-LEVEL FOR INCLUSION      0.000000
F-LEVEL FOR DELETION       0.000000
TOLERANCE LEVEL            0.001000


STEP NUMBER    1
VARIABLE ENTERED    4

MULTIPLE R          0.6987
STD. ERROR OF EST.  0.1782

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   1        44.954         44.954     1416.054
        RESIDUAL   1485        47.143         0.032
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.20955)			.					
Q56 4	0.68791	0.01928	1416.0540	.	Q48	2	-0.02024	0.9785	0.6082
				.	Q55	3	-0.03930	0.9625	2.2960
				.	Q63	5	-0.01119	0.9982	0.1860
				.	Q50A	6	-0.02706	0.9934	1.0871
				.	Q50C	7	0.05955	0.9966	5.2811
				.	2+7	8	0.00392	0.9998	0.0228
				.	3X4	9	-0.01528	0.9920	0.3464
				.	5+6	10	-0.08605	0.9945	11.0707
				.	8+9	11	-0.06466	0.9645	6.2297
				.	49+58	12	-0.03871	0.9870	2.2276
				.	51+52	13	-0.03737	0.9874	2.0750
				.	(F)	14	0.02047	0.9860	0.6223

```
STEP NUMBER    2
VARIABLE ENTERED    3

MULTIPLE R          0.6992
STD. ERROR OF EST.  0.1781

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   2        45.027         22.513     704.793
        RESIDUAL   1484        47.070         0.032
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.22507)			.					
Q55 3	-0.02824	0.01864	2.2360	.	Q48	2	-0.01916	0.9778	0.5445
Q56 4	0.68242	0.01863	1342.5625	.	Q63	5	-0.02207	0.9320	0.7230
				.	Q50A	6	-0.04566	0.8472	3.0986
				.	Q50C	7	0.05406	0.8743	4.3474
				.	2+7	8	0.00573	0.9977	0.0487
				.	3X4	9	-0.02255	0.9614	0.7546
				.	5+6	10	-0.08642	0.9843	11.2114
				.	8+9	11	-0.05164	0.6831	3.9654
				.	49+58	12	-0.04164	0.9820	2.5755
				.	51+52	13	-0.03640	0.9868	1.9673
				.	(F)	14	0.02464	0.9757	0.9006

Table 5-6.   (Continued)

```
STEP NUMBER    3
VARIABLE ENTERED    12

MULTIPLE R          0.6999
STD. ERROR OF EST.  0.1789

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    3        45.109          15.036       474.556
     RESIDUAL    1483        46.988           0.032
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.24036)							
Q55 3	-0.03038	0.01867	2.6438		Q48 2	-0.00545	0.8667	0.0440
Q56 4	0.67855	0.01876	1308.0965		Q63 5	-0.01618	0.9122	0.3883
49+58 12	-0.04754	0.02962	2.5755		Q50A 6	-0.03664	0.7968	1.9926
					Q50C 7	0.05877	0.8648	5.1365
					2+7 8	0.00647	0.9974	0.0620
					3X4 9	-0.02461	0.9591	0.8981
					5+6 10	-0.08134	0.9619	9.8700
					8+9 11	-0.05219	0.6830	4.0484
					51+52 13	-0.02427	0.8838	0.8734
					(F) 14	0.02536	0.9754	0.9536

```
STEP NUMBER    4
VARIABLE ENTERED    8

MULTIPLE R          0.6999
STD. ERROR OF EST.  0.1781

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    4        45.110          11.278       355.708
     RESIDUAL    1482        46.986           0.032
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.23748)							
Q55 3	-0.03058	0.01870	2.6744		Q48 2	-0.00540	0.8666	0.0431
Q56 4	0.67867	0.01877	1307.2998		Q63 5	-0.01613	0.9121	0.3852
2+7 8	0.00644	0.02588	0.0620		Q50A 6	-0.03632	0.7939	1.9562
49+58 12	-0.04767	0.02964	2.5872		Q50C 7	0.05880	0.8648	5.1384
					3X4 9	-0.02525	0.9522	0.9449
					5+6 10	-0.08226	0.9541	10.0885
					8+9 11	-0.05214	0.6829	4.0366
					51+52 13	-0.02400	0.8819	0.8533
					(F) 14	0.02516	0.9743	0.9370

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q56	4	0.6987	0.4881	0.4881	1416.0540	1
2	Q55	3	0.6992	0.4889	0.0008	2.2960	2
3	49+58 12		0.6999	0.4898	0.0009	2.5755	3
4	2+7	8	0.6999	0.4898	0.0000	0.0620	4

Table 5-7. Actual Acquisition Time for Information

```
SUB-PROBLEM     8
DEPENDENT VARIABLE        Q12
MAXIMUM NUMBER OF STEPS    64
F-LEVEL FOR INCLUSION   0.000000
F-LEVEL FOR DELETION    0.000000
TOLERANCE LEVEL         0.001000


STEP NUMBER   1
VARIABLE ENTERED   17

MULTIPLE R            0.3115
STD. ERROR OF EST.   0.2091

ANALYSIS OF VARIANCE
                DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
   REGRESSION    1        19.289          19.289       441.358
   RESIDUAL    4107       179.492          0.044
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11114)						
3X4 17	0.37895	0.01804	441.3592	Q10 1	-0.06051	0.9964	15.0898
				Q32 2	0.08087	0.9980	27.0311
				Q55 3	-0.05435	0.9666	12.1662
				Q56 4	-0.03369	0.9905	4.6653
				Q13 6	0.65176	0.8378	3032.3045
				Q14 7	0.22718	0.9984	223.4384
				Q15 8	-0.00034	0.9996	0.0005
				Q17 9	-0.19956	0.9912	170.3001
				Q16 10	0.06128	0.9994	15.4791
				Q23 11	0.14392	0.9950	86.8521
				Q26 12	0.18459	0.9937	144.8486
				Q27 13	0.18392	0.9926	143.7533
				Q28 14	0.04490	0.9998	8.2952
				Q29 15	-0.04668	0.9966	8.8895
				2+7 16	-0.01912	0.9938	1.5020
				5+6 18	0.05988	0.9999	14.7742
				8+9 19	0.00091	0.9619	0.0034
				49+58 20	0.15379	0.9974	99.4587
				61+62 21	0.08958	0.9931	33.2165
				14+15 22	0.11464	1.0000	54.6769
				14+17 23	-0.00854	0.9976	0.2995
				18+26 24	0.19580	0.9816	163.6951
				20+27 25	0.16999	0.9872	122.1752
				21+24 26	0.12150	0.9909	61.5185
				22+25 27	0.20920	0.9851	187.9260
				(E) 28	0.11448	0.9943	54.5220
				(P) 29	0.11510	0.9975	55.1287
				(F) 30	0.03694	0.9985	5.6117
				(I) 31	0.14743	0.9852	91.2317
				30+31 32	0.00687	0.9992	0.1939

```
STEP NUMBER   2
VARIABLE ENTERED   24

MULTIPLE R            0.3628
STD. ERROR OF EST.   0.2050

ANALYSIS OF VARIANCE
                DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
   REGRESSION    2        26.171          13.085       311.269
   RESIDUAL    4106       172.610          0.042
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.04329)						
3X4 17	0.34735	0.01786	373.7095	Q10 1	-0.06151	0.9964	15.5907
18+26 24	0.10903	0.00852	163.6951	Q32 2	0.06610	0.9911	18.0126
				Q55 3	-0.02908	0.9495	3.4750
				Q56 4	-0.03264	0.9904	4.3784
				Q13 6	0.63874	0.8092	2828.9822
				Q14 7	0.19971	0.9677	170.5309

Table 5-7. (Continued)

.	Q15	8	0.00788	0.9979	0.2548
.	Q17	9	-0.14868	0.8949	92.7967
.	Q16	10	0.06964	0.9981	20.0034
.	Q23	11	0.06184	0.7844	15.7597
.	Q26	12	0.08781	0.6518	31.9004
.	Q27	13	0.09330	0.6938	36.0446
.	Q28	14	0.04375	0.9997	7.8716
.	Q29	15	-0.05376	0.9956	11.8965
.	2+7	16	-0.01871	0.9938	1.4382
.	5+6	18	0.05105	0.9974	10.7246
.	8+9	19	0.02209	0.9512	2.0048
.	49+58	20	0.14470	0.9936	87.7851
.	61+62	21	0.06393	0.9735	16.8459
.	14+15	22	0.10588	0.9968	46.5406
.	14+17	23	0.01794	0.9800	1.3223
.	20+27	25	0.00648	0.2720	0.1721
.	21+24	26	0.06782	0.9040	18.9695
.	22+25	27	0.15282	0.8629	98.1547
.	(E)	28	0.07601	0.9493	23.8536
.	(P)	29	0.09747	0.9871	39.5697
.	(F)	30	0.03727	0.9985	5.7089
.	(I)	31	0.14628	0.9848	89.7567
.	30+31	32	0.01469	0.9977	0.8862

STEP NUMBER   3
VARIABLE ENTERED   20

MULTIPLE R   0.3871
STD. ERROR OF EST. 0.2029

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	29.785	9.928	241.160
RESIDUAL	4105	168.996	0.0	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.00723)			.				
3X4 17	0.35774	0.01770	408.4339	.	Q10	1	-0.04624	0.9841	8.7921
49+58 20	0.19310	0.02061	87.7851	.	Q32	2	0.06555	0.9910	17.7119
18+26 24	0.10412	0.00845	151.8279	.	Q55	3	-0.02289	0.9476	2.1522
				.	Q56	4	-0.01708	0.9786	1.1970
				.	Q13	6	0.63121	0.7931	2718.0998
				.	Q14	7	0.19345	0.9642	159.5534
				.	Q15	8	0.00687	0.9979	0.1934
				.	Q17	9	-0.15205	0.8948	97.1221
				.	Q16	10	0.05585	0.9879	12.8400
				.	Q23	11	0.05793	0.7836	13.8198
				.	Q26	12	0.08142	0.6501	27.3882
				.	Q27	13	0.08655	0.6918	30.9748
				.	Q28	14	0.03285	0.9936	4.4325
				.	Q29	15	-0.03594	0.9794	5.3086
				.	2+7	16	-0.02194	0.9934	1.9761
				.	5+6	18	0.02871	0.9721	3.3846
				.	8+9	19	0.02891	0.9493	3.4327
				.	61+62	21	0.05102	0.9648	10.7095
				.	14+15	22	0.10104	0.9956	43.0113
				.	14+17	23	0.01101	0.9777	0.4976
				.	20+27	25	0.00686	0.2720	0.1930
				.	21+24	26	0.06207	0.9022	15.8722
				.	22+25	27	0.14460	0.8587	87.6687
				.	(E)	28	0.04461	0.8998	8.1846
				.	(P)	29	0.08002	0.9701	26.4491
				.	(F)	30	0.03492	0.9951	5.0119
				.	(I)	31	0.14244	0.9834	84.9943
				.	30+31	32	0.00839	0.9957	0.2890

Table 5-7. (Continued)

```
STEP NUMBER    4
VARIABLE ENTERED   26

MULTIPLE R              0.3913
STD. ERROR OF EST.     0.2025

ANALYSIS OF VARIANCE
                     DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
          REGRESSION   4        30.436          7.609       185.493
          RESIDUAL  4104       168.345          0.041
```

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03453)			:					
3X4 17	0.35351	0.01770	390.8437	:	Q10	1	-0.04521	0.9838	8.4028
49+58 20	0.19944	0.02059	86.6195	:	Q32	2	0.06523	0.9910	17.5342
18+26 24	0.09389	0.00882	113.0421	:	Q55	3	-0.02194	0.9473	1.9753
21+24 26	0.05923	0.01487	15.8722	:	Q56	4	-0.01640	0.9784	1.1034
				:	Q13	6	0.63043	0.7918	2706.2483
				:	Q14	7	0.19127	0.9624	155.8070
				:	Q15	8	0.00444	0.9963	0.0808
				:	Q17	9	-0.15118	0.8945	95.9724
				:	Q16	10	0.05564	0.9879	12.7418
				:	Q23	11	0.05334	0.7789	11.7087
				:	Q26	12	0.08062	0.6500	26.8421
				:	Q27	13	0.08428	0.6907	29.3546
				:	Q28	14	0.03445	0.9930	4.8762
				:	Q29	15	-0.03425	0.9786	4.8197
				:	2+7	16	-0.02097	0.9931	1.8050
				:	5+6	18	0.02574	0.9698	2.7210
				:	8+9	19	0.02909	0.9493	3.4758
				:	61+62 21		0.05278	0.9642	11.4624
				:	14+15 22		0.09887	0.9927	40.5008
				:	14+17 23		0.01013	0.9775	0.4214
				:	20+27 25		0.00501	0.2718	0.1031
				:	22+25 27		0.14540	0.4026	88.6146
				:	(E)	28	0.04682	0.8988	9.0155
				:	(P)	29	0.08045	0.9701	26.7257
				:	(F)	30	0.03424	0.9980	4.8163
				:	(I)	31	0.14692	0.9795	90.5132
				:	30+31 32		0.00117	0.9822	0.0056

```
STEP NUMBER    5
VARIABLE ENTERED   28

MULTIPLE R              0.3937
STD. ERROR OF EST.     0.2023

ANALYSIS OF VARIANCE
                     DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
          REGRESSION   5        30.805          6.161       150.488
          RESIDUAL  4103       167.976          0.041
```

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03740)			:					
3X4 17	0.35010	0.01772	390.3341	:	Q10	1	-0.04722	0.9822	9.1652
49+58 20	0.17487	0.02114	68.4355	:	Q32	2	0.06135	0.9830	15.4991
18+26 24	0.08826	0.00901	96.0630	:	Q55	3	-0.00798	0.8583	0.2610
21+24 26	0.06074	0.01486	16.7027	:	Q56	4	-0.02130	0.9683	1.8622
(E) 28	0.03223	0.01073	9.0155	:	Q13	6	0.62940	0.7884	2691.0063
				:	Q14	7	0.18913	0.9593	152.1723
				:	Q15	8	0.00021	0.9682	0.0002
				:	Q17	9	-0.15011	0.8938	94.5581
				:	Q16	10	0.05410	0.9867	12.0427
				:	Q23	11	0.04580	0.7543	8.6238
				:	Q26	12	0.08135	0.6499	27.3247
				:	Q27	13	0.08442	0.6907	29.4468
				:	Q28	14	0.03589	0.9921	5.2909
				:	Q29	15	-0.03543	0.9780	5.1543
				:	2+7	16	-0.01808	0.9892	1.3414
				:	5+6	18	0.02111	0.9598	1.8293
				:	8+9	19	0.03803	0.9195	5.9419
				:	61+62 21		0.04283	0.9085	7.5391
				:	14+15 22		0.09475	0.9827	37.1581
				:	14+17 23		0.00939	0.9772	0.3618
				:	20+27 25		0.00422	0.2718	0.0732
				:	22+25 27		0.14315	0.4014	85.8133
				:	(P)	29	0.07134	0.9130	20.9865
				:	(F)	30	0.03318	0.9974	4.5207
				:	(I)	31	0.14335	0.9712	86.0651
				:	30+31 32		0.00228	0.9817	0.0213

Table 5-7. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   1

MULTIPLE R   0.3960
STD. ERROR OF EST.   0.2021

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	31.179	5.197	127.184
RESIDUAL	4102	167.601	0.041	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.01031)			Q32	2	0.6271	0.9823	16.1901
Q10 1	-0.03873	0.01279	9.1652	Q55	3	-0.01573	0.8365	1.0147
3X4 17	0.35287	0.01773	395.2714	Q56	4	0.01649	0.4934	1.1161
49+58 20	0.16737	0.02126	61.9737	Q13	6	0.62978	0.7884	2695.7955
18+26 24	0.08833	0.00900	95.3948	Q14	7	0.18836	0.9588	150.8552
21+24 26	0.05999	0.01485	15.3232	Q15	8	-0.00078	0.9878	0.0025
(E) 28	0.03356	0.01073	9.7776	Q17	9	-0.14954	0.8936	93.8074
				Q16	10	0.04990	0.9778	10.2353
				Q23	11	0.04611	0.7542	8.7383
				Q26	12	0.08202	0.6498	27.7728
				Q27	13	0.08573	0.6902	30.3640
				Q28	14	0.03213	0.9853	4.2376
				Q29	15	-0.00927	0.6340	0.3524
				2+7	16	-0.01880	0.9890	1.4507
				5+6	18	0.01467	0.9410	0.8825
				8+9	19	0.03031	0.8916	3.7699
				61+62 21		0.04369	0.9082	7.8413
				14+15 22		0.09359	0.9820	36.2361
				14+17 23		0.00930	0.9772	0.3550
				20+27 25		0.00529	0.2716	0.1146
				22+25 27		0.14221	0.4011	86.6490
				(P)	29	0.06993	0.9129	20.1542
				(F)	30	0.02978	0.9919	3.6604
				(I)	31	0.14548	0.9697	88.6767
				30+31 32		0.00081	0.9807	0.0027

STEP NUMBER   7
VARIABLE ENTERED   14

MULTIPLE R   0.3971
STD. ERROR OF EST.   0.2021

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	31.352	4.479	109.706
RESIDUAL	4101	167.428	0.041	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.02298)			Q32	2	0.06287	0.9823	16.2678
Q10 1	-0.03654	0.01283	9.1099	Q55	3	-0.01962	0.8251	1.5781
Q28 14	0.02388	0.01160	4.2376	Q56	4	0.01852	0.4916	1.4061
3X4 17	0.35294	0.01772	396.7335	Q13	6	0.62981	0.7883	2695.5004
49+58 20	0.16412	0.02111	53.3038	Q14	7	0.18650	0.9528	147.7504
18+26 24	0.08799	0.00899	95.6953	Q15	8	-0.00091	0.9877	0.0034
21+24 26	0.06082	0.01485	15.7751	Q17	9	-0.14896	0.8932	93.0439
(E) 28	0.03414	0.01073	13.1192	Q16	10	0.04493	0.9470	8.2936
				Q23	11	0.04739	0.7532	9.2284
				Q26	12	0.07911	0.6425	25.8192
				Q27	13	0.08307	0.6838	28.4863
				Q29	15	-0.00356	0.6145	0.0521
				2+7	16	-0.02012	0.9874	1.6598
				5+6	18	0.01350	0.9397	0.7477
				8+9	19	0.02448	0.8572	2.4593
				61+62 21		0.04431	0.9079	8.0660
				14+15 22		0.09235	0.9802	35.2651
				14+17 23		0.00817	0.9760	0.2737
				20+27 25		0.00469	0.2715	0.0902
				22+25 27		0.14310	0.4009	85.7137
				(P)	29	0.06973	0.9128	20.0322
				(F)	30	0.02869	0.9911	3.4241
				(I)	31	0.15503	0.9314	100.9724
				30+31 32		0.00122	0.9806	0.0061

Table 5-7.   (Continued)

STEP NUMBER   8
VARIABLE ENTERED   30

MULTIPLE R   0.3980
STD. ERROR OF EST.   0.2020

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	31.492	3.936	96.477
RESIDUAL	4100	167.289	0.041	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.02793)			:	Q32 2	0.06254	0.9822	16.0929
Q10 1	-0.03483	0.01286	7.3350	:	Q55 3	-0.02313	0.8141	2.1937
Q28 14	0.02326	0.01160	4.0211	:	Q56 4	0.02075	0.4884	1.7655
3X4 17	0.35413	0.01773	399.1197	:	Q13 6	0.62991	0.7882	2694.2254
49+58 20	0.16406	0.02131	59.2952	:	Q14 7	0.18606	0.9525	146.9862
18+26 24	0.08812	0.00899	95.0318	:	Q15 8	0.00034	0.9859	0.0005
21+24 26	0.06047	0.01485	15.5939	:	Q17 9	-0.14975	0.8927	94.0248
(E) 28	0.03359	0.01073	9.7952	:	Q16 10	0.04398	0.9458	7.9439
(F) 30	0.04339	0.02372	3.4241	:	Q23 11	0.04791	0.7529	9.4299
				:	Q26 12	0.07964	0.6424	26.0327
				:	Q27 13	0.08349	0.6037	28.7765
				:	Q29 15	-0.00167	0.6118	0.0114
				:	2+7 16	-0.02131	0.9858	1.8614
				:	5+6 18	0.01169	0.9359	0.5603
				:	8+9 19	0.02050	0.8390	1.7230
				:	61+62 21	0.04482	0.9077	8.2493
				:	14+15 22	0.09314	0.9796	35.8726
				:	14+17 23	0.00729	0.9751	0.2178
				:	20+27 25	0.00470	0.2715	0.0906
				:	22+25 27	0.14342	0.4009	86.0842
				:	(P) 29	0.06932	0.9126	19.7939
				:	(I) 31	0.15446	0.9313	100.5805
				:	30+31 32	0.00100	0.9805	0.0041

STEP NUMBER   9
VARIABLE ENTERED   3

MULTIPLE R   0.3986
STD. ERROR OF EST.   0.2020

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	31.581	3.509	86.026
RESIDUAL	4099	167.199	0.041	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.01653)			:	Q32 2	0.06237	0.9821	16.0025
Q10 1	-0.03759	0.01299	9.3689	:	Q56 4	0.01923	0.4865	.5162
Q55 3	-0.02046	0.01382	2.1937	:	Q13 6	0.62984	0.7853	2694.6639
Q28 14	0.02523	0.01168	4.6712	:	Q14 7	0.18806	0.9483	150.2458
3X4 17	0.35026	0.01791	382.2724	:	Q15 8	0.00051	0.5858	0.0011
49+58 20	0.16411	0.02130	59.3489	:	Q17 9	-0.14924	0.8921	93.3481
18+26 24	0.08731	0.00901	93.9528	:	Q16 10	0.04477	0.9448	8.2292
21+24 26	0.05982	0.01485	16.2298	:	Q23 11	0.04736	0.7525	9.2138
(E) 28	0.02845	0.01128	5.3627	:	Q26 12	0.08002	0.6421	26.4088
(F) 30	0.04799	0.02388	4.0335	:	Q27 13	0.08393	0.6035	29.0724
				:	Q29 15	-0.00326	0.6090	0.0435
				:	2+7 16	-0.02036	0.9840	1.6988
				:	5+6 18	0.01237	0.9351	0.6275
				:	8+9 19	0.03609	0.6447	5.3447
				:	61+62 21	0.04248	0.8960	7.4080
				:	14+15 22	0.09414	0.9781	36.639_
				:	14+17 23	0.00878	0.9711	0.3160
				:	20+27 25	0.00449	0.2715	0.0828
				:	22+25 27	0.14313	0.4008	85.7084
				:	(P) 29	0.06818	0.7099	19.1407
				:	(I) 31	0.15430	0.9307	99.9454
				:	30+31 32	0.00054	0.9801	0.0012

Table 5-7. (Continued)

STEP NUMBER   10
VARIABLE ENTERED   19

MULTIPLE R   0.4000
STD. ERROR OF EST.   0.2019

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	31.799	3.180	78.040
RESIDUAL	4098	164.982	0.041	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.02965)			.					
Q10	1	-0.03473	0.01304	7.3895	.	Q32	2	0.06479	0.9783	17.2706
Q55	3	-0.03799	0.01575	5.8157	.	Q56	4	0.01979	0.4865	1.6045
Q28	14	0.02086	0.01182	3.1164	.	Q13	6	0.62975	0.7851	2692.7442
3X4	17	0.35488	0.01802	389.0052	.	Q14	7	0.18788	0.9482	149.9070
8+9	19	0.04474	0.01935	5.3447	.	Q15	8	0.00083	0.9857	0.0028
49+58	20	0.16637	0.02131	60.9282	.	Q17	9	-0.15002	0.8918	94.3325
18+26	24	0.08816	0.00901	95.7458	.	Q16	10	0.04265	0.9412	7.4657
21+24	26	0.05958	0.01484	15.1136	.	Q23	11	0.05055	0.7473	10.4962
(E)	28	0.02912	0.01128	5.6676	.	Q26	12	0.07829	0.6404	25.2694
(F)	30	0.04228	0.02399	3.1058	.	Q27	13	0.08286	0.6828	20.3238
					.	Q29	15	-0.00322	0.6090	0.0424
					.	2+7	16	-.01996	0.9839	1.6322
					.	5+6	18	0.01318	0.9347	0.7116

61+62	21	0.04814	0.8779	9.5150
14+15	22	0.09430	0.9781	36.7613
14+17	23	0.00807	0.9797	0.2670
20+27	25	0.034 3	0.2715	0.0878
22+25	27	0.14460	0.4003	87.4990
(P)	29	0.07141	0.9038	21.0001
(I)	31	0.15527	0.9303	101.2106
30+31	32	0.00100	0.9800	0.0041

STEP NUMBER   11
VARIABLE ENTERED   4

MULTIPLE R   0.4004
STD. ERROR OF EST.   0.2018

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	11	31.865	2.897	71.102
RESIDUAL	4097	166.916	0.041	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03541)			.					
Q10	1	-0.05036	0.01796	7.8654	.	Q32	2	0.06535	0.9776	17.5693
Q55	3	-0.03695	0.01577	5.4852	.	Q13	6	0.62974	0.7850	2691.8759
Q56	4	0.02261	0.01785	1.6045	.	Q14	7	0.18735	0.9471	149.0032
Q28	14	0.02159	0.01183	3.3290	.	Q15	8	0.00002	0.9841	0.0000
3X4	17	0.35363	0.01804	384.1633	.	Q17	9	-0.15019	0.8917	94.5234
8+9	19	0.04511	0.01935	5.4321	.	Q16	10	0.04279	0.9412	7.5125
49+58	20	0.16809	0.02136	61.9528	.	Q23	11	0.05061	0.7473	10.5172
18+26	24	0.08855	0.00901	95.4895	.	Q26	12	0.07852	0.6403	25.4081
21+24	26	0.05953	0.01484	15.0930	.	Q27	13	0.08301	0.6828	28.4198
(E)	28	0.02801	0.01131	6.1331	.	Q29	15	-0.00681	0.5900	0.1901
(F)	30	0.04426	0.02404	3.3895	.	2+7	16	-0.02024	0.9837	1.6792
					.	5+6	18	0.01397	0.9332	0.7997
					.	61+62	21	0.04919	0.8757	9.9363
					.	14+15	22	0.09345	0.9757	36.0855
					.	14+17	23	0.00753	0.9700	0.2325
					.	20+27	25	0.00493	0.2714	0.0994
					.	22+25	27	0.14453	0.4003	87.3865
					.	(P)	29	0.07271	0.9007	21.7693
					.	(I)	31	0.15570	0.9299	101.7669
					.	30+31	32	0.00125	0.9798	0.0064

Table 5-7. (Continued)

STEP NUMBER 12
VARIABLE ENTERED 18

MULTIPLE R 0.4006
STD. ERROR OF EST. 9.2018

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	31.897	2.658	65.240
RESIDUAL	4696	166.884	C.041	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04634)							
Q10 1	-0.04929	0.01800	7.5038		Q32 2	0.06535	0.9776	17.5648
Q55 3	-0.03743	0.01578	5.6231		Q13 6	0.62976	0.7850	2691.5394
Q56 4	0.02324	0.01795	1.6924		Q14 7	0.18730	0.5671	149.0140
Q28 14	0.02124	0.01184	3.2187		Q15 8	-0.00033	0.9035	0.0004
3X4 17	0.35336	0.01805	383.4556		Q17 9	-0.15040	0.3910	96.7790
5+6 18	0.01596	0.01785	3.7997		Q16 10	0.04230	0.9463	7.3668
8+9 19	0.04650	0.01936	5.5235		Q23 11	0.04996	0.7454	10.2483
49+58 20	0.16600	0.02148	59.7864		Q26 12	0.07845	0.6483	25.3571
18+26 24	0.08852	0.00901	95.4258		Q27 13	0.08323	0.6826	28.5652
21+24 26	0.05964	0.01486	15.6725		Q29 15	-0.00609	0.5804	0.1517
(E) 28	0.02685	0.01138	5.5637		2+7 16	-0.02163	0.9793	1.9171
(F) 30	0.04299	0.02409	3.1853		61+62 21	0.04056	0.8735	0.6889
					14+15 22	0.08321	0.9752	35.9874
					14+17 23	0.00740	0.9699	0.2241
					20+27 25	0.00542	0.2711	0.1205
					22+25 27	0.14458	0.4003	87.4221
					(P) 29	0.07237	0.9006	21.5821
					(I) 31	0.15613	0.9293	102.3165
					30+31 32	0.00003	0.9789	0.0028

STEP NUMBER 13
VARIABLE ENTERED 23

MULTIPLE R 0.4006
STD. ERROR OF EST. 9.2019

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	13	31.906	2.454	60.228
RESIDUAL	4695	166.874	0.041	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04987)							
Q10 1	-0.04922	0.01800	7.4752		Q32 2	0.06507	0.5765	17.7108
Q55 3	-0.03778	0.01580	5.7151		Q13 6	0.62976	0.7850	2690.9076
Q56 4	0.02300	0.01787	1.6957		Q14 7	0.23718	0.5618	244.0413
Q28 14	0.02111	0.01185	3.1762		Q15 8	-0.00108	0.9735	0.0046
3X4 17	0.35352	0.01805	383.5949		Q17 9	-0.23718	0.3856	244.0473
5+6 18	0.01588	0.01785	3.7912		Q16 10	0.04233	0.9402	7.3476
8+9 19	0.04531	0.01936	5.4768		Q23 11	0.05054	0.7424	10.4837
49+58 20	0.16550	0.02150	59.2944		Q26 12	0.07821	0.6391	25.1947
14+17 23	0.00861	0.01819	3.2241		Q27 13	0.08296	0.6808	29.3729
18+26 24	0.08908	0.00909	95.9918		Q29 15	-0.00611	0.5804	0.1528
21+24 26	0.05872	0.01487	15.6026		2+7 16	-0.02219	0.9708	2.0163
(E) 28	0.02668	0.01139	5.4856		61+62 21	0.04886	0.8724	9.7958
(F) 30	0.04273	0.02409	3.1458		14+15 22	0.09327	0.8203	40.0451
					20+27 25	0.00585	0.2709	0.1491
					22+25 27	0.14530	0.3991	81.5536
					(P) 29	0.07299	0.6988	21.9250
					(I) 31	0.15970	0.8665	107.1461
					30+31 32	0.00078	0.9789	0.0025

Table 5-7. (Continued)

```
STEP NUMBER   14
VARIABLE ENTERED   15

MULTIPLE R          0.4007
STD. ERROR OF EST.  0.2019

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   14       31.912         2.279       55.925
     RESIDUAL   4094      '66.868         0.041
```

	VARIABLES IN EQUATION			.			VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04754)			.					
Q10 1	-0.04645	0.01935	5.7650	.	Q32	2	0.06565	0.9765	17.7160
255 3	-0.03809	0.01582	5.7933	.	Q13	6	0.62975	0.7849	2689.9976
Q56 4	0.02424	0.01815	1.7834	.	Q14	7	0.23711	0.5615	243.8245
Q28 14	0.02035	0.01200	2.8752	.	Q15	8	-0.00106	0.9735	0.0046
Q29 15	-0.00613	0.01569	3.1528	.	Q17	9	-0.23711	0.3854	243.8245
3X4 17	0.35350	0.01805	383.4937	.	Q16	10	0.04196	0.9337	7.2203
5+6 18	0.01551	0.01788	3.7527	.	Q23	11	0.05077	0.7416	10.5763
A+9 19	0.04531	0.01937	5.4740	.	Q26	12	0.07823	0.6391	25.2060
49+58 20	0.16520	0.02153	55.8693	.	Q27	13	0.08294	0.6808	28.3533
14+17 23	0.00863	0.01819	0.2251	.	2+7	16	-0.02210	0.9705	1.9992
18+26 24	0.08928	0.00911	95.1024	.	61+62	21	0.04911	0.8713	9.8949
21+24 26	0.05956	0.01487	15.5053	.	14+15	22	0.09838	0.8202	40.0053
(E) 28	0.02654	0.01140	5.4136	.	20+27	25	0.00567	0.2709	0.1314
(F) 30	0.04233	0.02412	3.3796	.	22+25	27	0.14520	0.3991	88.1517
				.	(P)	29	0.07316	0.8983	22.0231
				.	(I)	31	0.15959	0.8658	106.9718
				.	30+31	32	0.00086	0.9787	0.0030

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDEN VARIABLES INCLUDED
1	3X4	17	0.3115	0.0970	0.0970	441.3582	1
2	18+26	24	0.3629	0.1317	0.0346	163.6951	2
3	49+58	20	0.3871	0.1498	0.0182	87.7851	3
4	21+24	26	0.3913	0.1531	0.0033	15.8722	4
5	(E)	28	0.3937	0.1550	0.0019	9.0155	5
6	Q10	1	0.3963	0.1569	0.0019	9.1652	6
7	Q28	14	0.3971	0.1577	0.0009	4.2376	7
8	(F)	30	0.3983	0.1584	0.0007	3.4241	8
9	Q55	3	0.3985	0.1589	0.0005	2.1937	9
10	8+9	19	0.4003	0.1600	0.0011	5.3447	10
11	Q56	4	0.4004	0.1603	0.0003	1.6045	11
12	5+6	18	0.4006	0.1605	0.0002	0.7997	12
13	14+17	23	0.4006	0.1605	0.0000	0.2241	13
14	Q29	15	0.4007	0.1605	0.0000	0.1528	14

Table 5-8. Inadequacy Index

```
SUB-PROBLM   13
DEPENDENT VARIABLE        I
MAXIMUM NUMBER OF STEPS      64
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000



STEP NUMBER    1
VARIABLE ENTERED   17

MULTIPLE R            0.1215
STD. ERROR OF EST.    0.1059

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
      REGRESSION   1         0.691          0.691       61.556
      RESIDUAL   4107        46.095         0.011
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40404)								
3X4 17	0.07172	0.00914	61.5551		Q10	1	0.03945	0.9964	6.3997
					Q32	2	0.65441	0.9980	3075.5350
					Q55	3	-0.07831	0.9666	25.3320
					Q56	4	0.02911	0.9905	3.4833
					Q12	5	0.14743	0.9030	91.2317
					Q13	6	0.31775	0.8378	461.1254
					Q14	7	0.09042	0.9964	33.8458
					Q15	8	-0.03024	0.9996	3.7590
					Q17	9	0.22356	0.9912	216.0064
					Q16	10	0.05871	0.9994	14.1998
					Q23	11	0.03117	0.9950	3.9929
					Q26	12	-0.02923	0.9937	3.5118
					Q27	13	-0.00015	0.9926	0.0001
					Q28	14	-0.19687	0.9998	165.5521
					Q29	15	0.02940	0.9966	3.5527
					2+7	16	-0.01721	0.9938	1.2168
					7+6	18	-0.02215	0.9999	2.0150
					6+9	19	-0.09073	0.9619	34.0788
					49+58	20	0.03875	0.9974	6.1744
					61+62	21	0.06704	0.9931	18.5351
					14+15	22	0.02165	1.0000	1.9255
					14+17	23	0.23928	0.9976	249.3737
					18+26	24	0.02051	0.9816	1.7273
					20+27	25	0.02861	0.9872	3.3638
					21+24	26	-0.05222	0.9909	11.2280
					22+25	27	0.06735	0.9851	18.7091
					(E)	28	0.10250	0.9943	43.6009
					(P)	29	0.10205	0.9979	43.2121
					(F)	30	0.00543	0.9985	0.1209
					30+31	32	-0.09237	0.9992	35.3320

```
STEP NUMBER    2
VARIABLE ENTERED   28

MULTIPLE R            0.1585
STD. ERROR OF EST.    0.1054

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
      REGRESSION   2         1.175          0.588       52.898
      RESIDUAL   4106        45.611         0.011
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.39371)								
3X4 17	0.06717	0.00912	54.2431		Q10	1	0.03819	0.9962	5.9949
(E) 28	0.03510	0.00532	43.6339		Q32	2	0.65068	0.9872	3014.1697
					Q55	3	-0.04772	0.8638	9.3687
					Q56	4	0.02207	0.9856	2.0002
					Q12	5	0.13732	0.8911	78.8935
					Q13	6	0.30869	0.8238	432.3524

Table 5-8.　(Continued)

Q14	7	0.08082	0.9881	26.9868
Q15	8	-0.03651	0.9936	6.0953
Q17	9	0.23474	0.9835	239.3860
Q16	10	0.05416	0.9971	12.0760
Q23	11	0.00562	0.9322	0.1297
Q26	12	-0.04240	0.9786	7.3946
Q27	13	-0.01312	0.9771	0.7070
Q28	14	-0.19714	0.9998	265.9889
Q29	15	0.02938	0.9966	3.5454
2+7	16	-0.01160	0.9907	0.5528
5+6	18	-0.03704	0.9803	5.6400
8+9	19	-0.07209	0.9236	21.4429
49+58	20	0.01508	0.9419	3.9334
61+62	21	0.04046	0.9171	6.7308
14+15	22	0.01016	0.9872	0.4236
14+17	23	0.24083	0.9975	252.7493
18+26	24	-0.00133	0.9372	0.0073
20+27	25	0.00949	0.9520	0.3694
21+24	26	-0.05686	0.9891	13.3158
22+25	27	0.05751	0.9748	13.6235
(P)	29	0.07707	0.9211	24.5301
(F)	30	0.00270	0.9977	0.0300
30+31	32	-0.09037	0.9986	33.8016

STEP NUMBER　3
VARIABLE ENTERED　29

MULTIPLE R　　　　　0.1758
STD. ERROR OF EST.　0.1051

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	1.446	0.482	43.644
RESIDUAL	4105	45.340	0.011	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.38811)			Q10	1	0.04151	0.9945
3X4　17	0.06583	0.00910	52.3522	Q32	2	0.64821	0.9783
(E)　28	0.02754	0.00552	24.9171	Q55	3	-0.04434	0.8619
(P)　29	0.03171	0.00640	24.5301	Q56	4	0.02776	0.9805

Right-side block (VARIABLES NOT IN EQUATION): PARTIAL CORR. | TOLERANCE | F TO ENTER

		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10	1	0.04151	0.9945	7.0841
Q32	2	0.64821	0.9783	2974.3164
Q55	3	-0.04434	0.8619	8.0855
Q56	4	0.02776	0.9805	3.1640
Q12	5	0.13148	0.8843	72.1907
Q13	6	0.30394	0.8173	417.7257
Q14	7	0.07906	0.9874	25.8101
Q15	8	-0.03437	0.9905	4.8527
Q17	9	0.24317	0.9759	257.9385
Q16	10	0.05376	0.9971	11.8951
Q23	11	0.00183	0.9299	0.0137
Q26	12	-0.04428	0.9781	8.0642
Q27	13	-0.01526	0.9764	0.9555
Q28	14	-0.19905	0.9995	169.3188
Q29	15	0.03073	0.9963	3.8787
2+7	16	-0.01096	0.9907	0.4932
5+6	18	-0.03945	0.9795	6.3984
8+9	19	-0.06585	0.9166	17.8709
49+58	20	0.00925	0.9364	0.3515
61+62	21	0.03506	0.9123	5.0517
14+15	22	0.01261	0.9862	0.6526
14+17	23	0.24597	0.9948	264.2848
18+26	24	-0.00491	0.9352	0.0990
20+27	25	0.00667	0.9507	0.1828
21+24	26	-0.05867	0.9887	14.1754
22+25	27	0.05328	0.9715	11.6820
(F)	30	0.00127	0.9974	0.0066
30+31	32	-0.09283	0.9978	35.6701

Table 5-8. (Continued)

```
STEP NUMBER    4
VARIABLE ENTERED   19

MULTIPLE R            0.1874
STD. ERROR OF EST.   0.1049

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    4         1.643          0.411        37.335
      RESIDUAL    4104        45.143         0.011
```

		VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE		COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT		0.40593)							
3X4	17	0.05072	0.00923	40.4432		Q10	1	0.03046	0.9637	3.8091
8+9	19	-0.03565	0.00843	17.8739		Q32	2	0.64695	0.9752	2353.3952
(E)	28	0.02353	0.00559	17.7323		Q55	3	-0.01226	0.6341	0.6165
(P)	29	0.02936	0.00641	23.9547		Q56	4	0.01669	0.9514	1.1437
						Q12	5	0.13396	0.8834	74.9747
						Q13	6	0.30370	0.8171	416.8771
						Q14	7	0.08262	0.9849	28.2029
						Q15	8	-0.03492	0.9905	5.0097
						Q17	9	0.24617	0.9747	264.6708
						Q16	10	0.06251	0.9818	16.0956
						Q23	11	-0.00525	0.9193	0.1133
						Q26	12	-0.04298	0.977ˉ	7.5924
						Q27	13	-0.01487	0.9764	0.9080
						Q28	14	-0.18993	0.9565	153.5515
						Q29	15	0.02014	0.9690	1.6664
						2+7	16	-0.00938	0.9901	0.3607
						5+6	18	-0.03723	0.9783	5.6949
						49+58	20	0.00944	0.9364	0.3657
						61+62	21	0.02373	0.8832	2.3127
						14+15	22	0.01393	0.9858	0.7958
						14+17	23	0.25100	0.9911	275.8637
						18+26	24	-0.00903	0.9316	0.3349
						20+27	25	0.00295	0.9477	0.0357
						21+24	26	-0.06050	0.9881	15.0750
						22+25	27	0.05029	0.9693	10.4022
						(F)	30	0.01204	0.9716	0.5950
						30+31	32	-0.09384	0.9977	36.4515

```
STEP NUMBER    5
VARIABLE ENTERED   18

MULTIPLE R            0.1909
STD. ERROR OF EST.   0.1048

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    5         1.705          0.341        31.041
      RESIDUAL    4103        45.081         C.011
```

		VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE		COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT		0.42315)							
3X4	17	0.05883	0.00923	40.6435		Q10	1	0.02520	0.9422	2.6063
5+6	18	-0.02160	0.00905	5.6949		Q32	2	0.64736	0.9752	2959.1215
8+9	19	-0.03494	0.00843	17.1627		Q55	3	-0.01033	0.6324	0.4376
(E)	28	0.02528	0.00563	23.1524		Q56	4	0.01154	0.9323	0.5461
(P)	29	0.02986	0.00641	21.6734		Q12	5	0.13570	0.8819	76.9516
						Q13	6	0.30481	0.8167	420.1421
						Q14	7	0.08328	0.9847	28.6510
						Q15	8	-0.03405	0.9899	4.7622
						Q17	9	0.24662	0.9746	265.6446
						Q16	10	0.06484	0.9785	17.3166
						Q23	11	-0.00312	0.9162	0.0398
						Q26	12	-0.04216	0.9772	7.3055
						Q27	13	-0.01467	0.9763	0.8833
						Q28	14	-0.18842	0.9541	150.9958
						Q29	15	0.01473	0.9472	0.8906
						2+7	16	-0.00568	0.9801	0.1322
						49+58	20	0.01449	0.9202	0.8609
						61+62	21	0.02589	0.8804	2.7507
						14+15	22	0.01496	0.9851	0.9182
						14+17	23	0.25182	0.9908	277.7247
						18+26	24	-0.00821	0.9311	0.2765
						20+27	25	0.00295	0.9477	0.0357
						21+24	26	-0.05831	0.9841	13.9961
						22+25	27	0.05230	0.9668	11.2508
						(F)	30	0.01472	0.9667	0.8887
						30+31	32	-0.09230	0.9956	35.2480

Table 5-8. (Continued)

STEP NUMBFR   6
VARIABLE ENTERED   1

MULTIPLE R   0.1925
STD. ERROR OF EST.   0.1048

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSIO'	6	1.734	0.289	26.312
RESIDUAL	4102	45.052	0.011	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.41037)							
Q10 1	0.01093	0.00677	2.6063		Q32 2	0.64716	0.9747	2955.3382
3X4 17	0.05841	0.00923	40.0355		Q55 3	-0.00838	0.6285	0.2879
5+6 18	-0.01940	0.00915	4.4911		Q56 4	-0.00801	0.4906	0.2631
8+9 19	-0.03255	0.00856	14.4554		Q12 5	0.13714	0.8798	78.6059
(E) 28	0.02515	0.00563	19.9467		Q13 6	0.30543	0.8164	421.9348
(P) 29	0.03040	0.00642	22.4238		Q14 7	0.08373	0.9844	28.9534
					Q15 8	-0.03356	0.9895	4.6240
					Q17 9	0.24627	0.9743	264.7725
					Q16 10	0.06699	0.9727	18.4866
					Q23 11	-0.00297	0.9162	0.0362
					Q26 12	-0.04245	0.9771	7.4017
					Q27 13	-0.01509	0.9761	0.9347
					U28 14	-0.18747	0.9518	149.3777
					Q29 15	0.00025	0.6324	0.0003
					2+7 16	-0.00568	0.9801	0.1324
					49+58 20	0.01705	0.9113	1.1928
					61+62 21	0.02611	0.8803	2.7977
					14+15 22	0.01558	0.9845	0.9962
					14+17 23	0.25179	0.9908	277.5981
					18+26 24	-0.00796	0.9310	0.2597
					20+27 25	0.00295	0.9477	0.0357
					21+24 26	-0.05789	0.9838	13.7918
					22+25 27	0.05323	0.9656	11.6520
					(F) 30	0.01569	0.9654	1.0098
					30+31 32	-0.09154	0.9945	34.6551

STEP NUMBER   7
VARIABLE ENTERED   20

MULTIPLE R   0.1932
STD. ERROR OF EST.   0.1048

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	1.747	0.250	22.725
RESIDUAL	4101	45.039	0.011	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40774)							
Q10 1	0.01166	0.00680	2.9390		Q32 2	0.64763	0.9745	2961.9099
3X4 17	0.05911	0.00925	40.8142		Q55 3	-0.00872	0.6282	0.3116
5+6 18	-0.02057	0.00922	4.9876		Q56 4	-0.00701	0.4888	0.2016
8+9 19	-0.03237	0.00856	14.2924		Q12 5	0.13610	0.8677	77.3759
49+58 20	0.01214	0.01112	1.1928		Q13 6	0.30554	0.8056	422.1597
(E) 28	0.02395	0.00574	17.4276		Q14 7	0.08310	0.9827	28.5079
(P) 29	0.02993	0.00644	21.6272		Q15 8	-0.03331	0.9893	4.5553
					Q17 9	0.24600	0.9739	264.3875
					Q16 10	0.06589	0.9670	17.8760
					Q23 11	-0.00272	0.9160	0.0302
					Q26 12	-0.04331	0.9749	7.7040
					Q27 13	-0.01599	0.9735	1.0462
					U28 14	-0.18925	0.9467	152.2915
					Q29 15	0.00142	0.6294	0.0083
					2+7 16	-0.00607	0.9796	0.1509
					61+62 21	0.02566	0.8797	2.7009
					14+15 22	0.01543	0.9844	0.9760
					14+17 23	0.25132	0.9888	276.4123
					18+26 24	-0.00805	0.9310	0.2638
					20+27 25	0.00287	0.9476	0.0337
					21+24 26	-0.05867	0.9821	14.1613
					22+25 27	0.05242	0.9630	11.2984
					(F) 30	0.01572	0.9654	1.0137
					30+31 32	-0.09227	0.9930	35.2082

Table 5-8. (Continued)

```
STEP NUMBER    9
VARIABLE ENTERED   30

MULTIPLE R             0.1939
STD. ERROR OF EST.     0.1048

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   8          1.758           0.220       20.011
        RESIDUAL   4100         45.028          0.011
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.40742)				Q32	2	0.64753	0.9741	2959.6123
Q10	1	0.01192	0.00681	3.0650	Q55	3	-0.00950	0.6267	3.3697
3X4	17	0.05922	0.00925	40.9543	Q56	4	-0.00603	0.4869	0.1491
5+6	18	-0.02113	0.00923	5.2536	Q12	5	0.13578	0.8673	76.9917
8+9	19	-0.03348	0.00866	15.1231	Q13	6	0.30547	0.8056	421.8559
49+58	20	0.01216	0.01112	1.1957	Q14	7	0.08290	0.9825	28.3603
(E)	23	0.02373	0.00574	17.0771	Q15	8	-0.03269	0.9075	4.3839
(P)	29	0.02974	0.00644	21.3411	Q17	9	0.24578	0.9735	263.5276
(F)	30	0.01255	0.01247	1.0137	Q16	10	0.06558	0.9665	17.7057
					Q23	11	-0.00263	0.9160	5.0284
					Q26	12	-0.04311	0.9747	7.6313
					Q27	13	-0.01579	0.9734	1.0222
					Q28	14	-0.18921	0.9467	152.1978
					Q29	15	0.00230	0.6274	0.0216
					2+7	16	-0.00658	0.9786	0.1776
					61+62	21	0.02558	0.8796	2.6843
					14+15	22	0.01586	0.9837	1.0308
					14+17	23	0.25105	0.9883	275.7135
					18+26	24	-0.00811	0.9310	0.2694
					20+27	25	0.00279	0.9476	0.0320
					21+24	26	-0.05885	0.9820	14.2454
					22+25	27	0.05234	0.9630	11.2621
					30+31	32	-0.09243	0.9929	35.3170

```
STEP NUMBER    9
VARIABLE ENTERED    3

MULTIPLE R             0.1941
STD. ERROR OF EST.     0.1048

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   9          1.762           0.196       17.826
        RESIDUAL   4099         45.024          0.011
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.40844)				Q32	2	0.64790	0.9737	2964.7938
Q10	1	0.01161	0.00683	2.8926	Q56	4	-0.00653	0.4856	0.1746
Q55	3	-0.00497	0.00817	0.3697	Q12	5	0.13549	0.8654	76.6417
3X4	17	0.05877	0.00928	40.0631	Q13	6	0.30555	0.8018	421.9892
5+6	18	-0.02097	0.00924	5.1537	Q14	7	0.08344	0.9804	28.7298
8+9	19	-0.03070	0.00994	9.5332	Q15	8	-0.03269	0.9874	4.3569
49+58	20	0.01229	0.01112	1.2225	Q17	9	0.24611	0.9729	264.2166
(E)	20	0.02278	0.00595	14.6719	Q16	10	0.06561	0.9664	17.7173
(P)	29	0.02970	0.00644	21.2750	Q23	11	-0.00269	0.9159	5.0297
(F)	30	0.01292	0.01249	1.0716	Q26	12	-0.04340	0.9739	7.7321
					Q27	13	-0.01601	0.9729	1.0512
					Q28	14	-0.18907	0.9463	151.9176
					Q29	15	0.00172	0.6251	0.0122
					2+7	16	-0.00621	0.9770	0.1579
					61+62	21	0.02526	0.8786	2.6172
					14+15	22	0.01617	0.9827	1.0714
					14+17	23	0.25187	0.9857	277.5748
					18+26	24	-0.00853	0.9292	0.2982
					20+27	25	0.00242	0.9461	0.0239
					21+24	26	-0.05932	0.9802	14.4694
					22+25	27	0.05206	0.9619	11.1355
					30+31	32	-0.09257	0.9927	35.4239

Table 5-8. (Continued)

```
STEP NUMBER   10
VARIABLE ENTERED    4

MULTIPLE R          0.1942
STD. ERROR OF EST.  0.1048

ANALYSIS OF VARIANCE
                  DF     SUM OF SQUARES    MEAN SQUARE     F RATIO
      REGRESSION  10         1.764            0.176        16.058
      RESIDUAL  4098         45.022           0.011
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.40950)								
Q10 1	0.01428	0.00934	2.3352		Q32	2	0.64794	0.9732	2964.6860
Q55 3	-0.00514	0.00818	0.3950		Q12	5	0.13563	0.8652	75.7835
Q56 4	-0.00388	0.00928	0.1746		Q13	6	0.30561	0.8018	422.0617
3X4 17	0.05897	0.00930	40.2220		Q14	7	0.08364	0.9797	28.8625
5+6 18	-0.02113	0.00925	5.2196		Q15	8	-0.03235	0.9858	4.2921
8+9 19	-0.03082	0.00995	9.5944		Q17	9	0.24622	0.9727	264.4144
49+58 20	0.01202	0.01114	1.1647		Q16	10	0.06555	0.9665	17.6774
(E) 28	0.02300	0.00597	14.8370		Q23	11	-0.00277	0.9158	0.0314
(P) 29	0.02954	0.00645	20.9637		Q26	12	-0.04362	0.9730	7.8095
(F) 30	0.01261	0.01251	1.0137		Q27	13	-0.01620	0.9721	1.0749
					Q28	14	-0.18958	0.9442	152.7389
					Q29	15	0.00294	0.6051	0.0354
					2+7	16	-0.00611	0.9768	0.1529
					61+62	21	0.02498	0.8765	2.5574
					14+15	22	0.01648	0.9806	1.1136
					14+17	23	0.25216	0.9349	278.1850
					18+26	24	-0.00875	0.9282	0.3136
					20+27	25	0.00218	0.9448	0.0194
					21+24	26	-0.05934	0.9802	14.4791
					22+25	27	0.05205	0.9619	11.1301
					30+31	32	-0.09263	0.9927	35.4566

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	3X4	17	0.1215	0.0148	0.0148	61.5561	1
2	(E)	28	0.1585	0.0251	0.0104	43.6009	2
3	(P)	29	0.1759	0.0309	0.0058	24.5301	3
4	8+9	19	0.1874	0.0351	0.0042	17.8709	4
5	5+6	18	0.1909	0.0364	0.0013	5.6949	5
6	Q10	1	0.1923	0.0371	0.0006	2.6063	6
7	49+58	20	0.1932	0.0373	0.0003	1.1928	7
8	(F)	30	0.1933	0.0376	0.0002	1.0137	8
9	Q55	3	0.1941	0.0377	0.0001	0.3697	9
10	Q56	4	0.1942	0.0377	0.0000	0.1746	10

FINISH CARD ENCOUNTERED
PROGRAM TERMINATED

Table 5-9. Desired Acquisition Time for Information

```
SUB-PROBLM    7
DEPENDENT VARIABLE        Q13
MAXIMUM NUMBER OF STEPS      64
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER    1
VARIABLE ENTERED   17

MULTIPLE R            0.4027
STD. ERROR OF EST.   0.334
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	88.897	88.897	795.051
RESIDUAL	4107	459.216	0.112	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.18287)						
3X4 17	0.81353	0.02885	795.0539	Q10 1	-0.02049	0.9964	1.7252
				Q32 2	0.06806	0.9980	19.1054
				Q55 3	-0.10259	0.9666	43.6706
				Q56 4	-0.00818	0.9905	0.2748
				Q12 5	0.65176	0.9030	3032.3045
				Q14 7	0.17299	0.9984	126.6652
				Q15 8	-0.02391	0.9996	2.3489
				Q17 9	-0.16476	0.9912	114.5749
				Q16 10	0.05466	0.9994	12.3026
				Q23 11	0.13334	0.9950	74.3246
				Q26 12	0.14379	0.9937	86.6808
				Q27 13	0.14771	0.9926	91.5883
				Q28 14	0.02049	0.9998	1.7242
				Q29 15	-0.02053	0.9966	1.7314
				2+7 16	-0.07614	0.9938	23.9427
				5+6 18	0.04184	0.9999	7.1997
				8+9 19	-0.04706	0.9619	9.1121
				49+58 20	0.14996	0.9974	94.4541
				61+62 21	0.09396	0.9931	36.5758
				14+15 22	0.06846	1.0000	19.3323
				14+17 23	-0.01676	0.9976	1.1534
				18+26 24	0.18468	0.9816	144.9826
				20+27 25	0.16067	0.9872	108.8013
				21+24 26	0.09824	0.9909	40.0120
				22+25 27	0.15986	0.9851	107.6784
				(E) 28	0.12954	0.9943	70.0777
				(P) 29	0.12047	0.9975	60.4721
				(F) 30	0.01169	0.9985	0.5615
				(I) 31	0.31775	0.9852	461.1254
				30+31 32	-0.03000	0.9992	3.6989

```
STEP NUMBER    2
VARIABLE ENTERED   25

MULTIPLE R            0.4287
STD. ERROR OF EST.   0.3301
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	100.751	50.376	462.360
RESIDUAL	4106	447.362	0.109	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08927)						
3X4 17	0.77966	0.02867	737.7759	Q10 1	-0.02256	0.9963	2.0897
20+27 25	0.14874	0.01428	105.8013	Q32 2	0.05478	0.9902	12.3565
				Q55 3	-0.08481	0.9524	29.7404
				Q56 4	-0.00763	0.9305	0.2390
				Q12 5	0.64201	0.8769	2878.4433
				Q14 7	0.14923	0.9682	93.4996

Table 5-9. (Continued)

.	Q15	8	-0.01832	0.9983	1.3780
.	Q17	9	-0.12350	0.9006	63.5816
.	Q16	10	0.05762	0.9992	13.6750
.	Q23	11	0.07969	0.8320	23.6501
.	Q26	12	0.07233	0.7316	21.6006
.	Q27	13	0.06750	0.6545	18.6789
.	Q28	14	0.01804	0.9996	1.3362
.	Q29	15	-0.02662	0.9953	2.9107
.	2+7	16	-0.07751	0.9938	24.8088
.	5+6	18	0.03825	0.9992	6.0143
.	8+9	19	-0.03234	0.9532	4.2983
.	49+58	20	0.14370	0.9947	86.5519
.	61+62	21	0.07315	0.9737	22.0818
.	14+15	22	0.05986	0.9965	14.7599
.	14+17	23	0.00361	0.9817	0.0535
.	18+26	24	0.09250	0.2705	35.4275
.	21+24	26	0.05819	0.9203	13.9489
.	22+25	27	0.11485	0.8787	54.8695
.	(E)	28	0.10236	0.9589	43.4694
.	(P)	29	0.10831	0.9900	48.7301
.	(F)	30	0.01162	0.9965	0.5546
.	(I)	31	0.31741	0.9844	459.9004
.	30+31	32	-0.02239	0.9967	2.0586

STEP NUMBER   3
VARIABLE ENTERED   20

MULTIPLE R   0.4480
STD. ERROR OF EST.   0.3267

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	109.989	36.663	343.513
RESIDUAL	4105	438.125	0.107	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.00775)			.				
3X4 17	0.79462	3.02842	781.9355	.	Q10	1	-0.00665	0.9839	0.1816
49+58 23	0.30855	0.03317	85.5519	.	Q32	2	0.05403	0.9901	12.0148
20+27 25	0.14213	0.01415	100.8636	.	Q55	3	-0.07903	0.9503	25.7948
				.	Q56	4	0.00828	0.9786	0.2813
				.	Q12	5	0.63427	0.8578	2762.3748
				.	Q14	7	0.14212	0.9646	84.6023
				.	Q15	8	-0.01950	0.9983	1.5613
				.	Q17	9	-0.12599	0.9006	66.1932
				.	Q16	10	0.04397	0.9893	7.9483
				.	Q23	11	0.07089	0.8307	20.7281
				.	Q26	12	0.06459	0.7290	17.1932
				.	Q27	13	0.05939	0.6521	14.5250
				.	Q28	14	0.00690	0.9935	0.1955
				.	Q29	15	-0.00845	0.9792	0.2928
				.	2+7	16	-0.08128	0.9934	27.2930
				.	5+6	18	0.01554	0.9735	0.9911
				.	8+9	19	-0.02598	0.9512	2.7713
				.	61+62	21	0.06026	0.9647	14.9567
				.	14+15	22	0.05527	0.9952	12.5739
				.	14+17	23	-0.00318	0.9795	0.0416
				.	18+26	24	0.08852	0.2702	32.4103
				.	21+24	26	0.05175	0.9181	11.0190
				.	22+25	27	0.10557	0.8739	46.2590
				.	(E)	28	0.07190	0.9079	21.3279
				.	(P)	29	0.09099	0.9726	34.2581
				.	(F)	30	0.00902	0.9981	0.3326
				.	(I)	31	0.31553	0.9831	453.7818
				.	30+31	32	-0.02909	0.9948	3.4770

Table 5-9. (Continued)

STEP NUMBER   4
VARIABLE ENTERED   27

MULTIPLE R   0.4578
STD. ERROR OF EST.   0.3249

ANALYSIS OF VARIANCE
                       DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
            REGRESSION   4   114.872   28.718   272.040

            RESIDUAL   4104   433.241   0.106

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.06389)							
3X4 17	0.77646	0.02839	749.1631	Q10	1	-0.00335	0.9829	0.0461
49+58 20	0.29186	0.03308	77.8632	Q32	2	0.04830	0.9869	9.5929
20+27 25	0.10914	0.01489	53.7573	Q55	3	-0.07531	0.9482	23.4041
22+25 27	0.15612	0.02295	45.2590	Q56	4	0.00968	0.9784	0.3842
				Q12	5	0.62898	0.8370	2685.7027
				Q14	7	0.13239	0.9537	73.1957
				Q15	8	-0.07229	0.9976	2.0401
				Q17	9	-0.11356	0.8846	53.6036
				Q16	10	0.04454	0.9893	8.1545
				Q23	11	0.05597	0.8120	12.8956
				Q26	12	0.05790	0.7257	13.7990
				Q27	13	0.05397	0.6501	11.9858
				Q28	14	0.01080	0.9921	0.4783
				Q29	15	-0.00590	0.9786	0.1428
				2+7	16	-0.08153	0.9934	27.4563
				5+6	18	0.01051	0.9712	0.4531
				8+9	19	-0.02192	0.9497	1.9726
				61+62	21	0.05626	0.9631	13.0275
				14+15	22	0.04795	0.9899	9.4558
				14+17	23	0.00025	0.9785	0.0003
				18+26	24	0.07451	0.2646	22.9031
				21+24	26	-0.03809	0.4237	5.9610
				(E)	28	0.06951	0.9073	19.9193
				(P)	29	0.08635	0.9702	30.8258
				(F)	30	0.00857	0.9981	0.3016
				(I)	31	0.31160	0.9797	441.2285
				30+31	32	-0.03582	0.9910	5.2725

STEP NUMBER   5
VARIABLE ENTERED   3

MULTIPLE R   0.4627
STD. ERROR OF EST.   0.3240

ANALYSIS OF VARIANCE
                       DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
            REGRESSION   5   117.330   23.466   223.501
            RESIDUAL   4103   430.784   0.105

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.01287)							
Q55 3	-0.09933	0.02053	23.4041	Q10	1	-0.01596	0.9565	1.0452
3X4 17	0.75313	0.02872	687.7646	Q32	2	0.04573	0.9856	8.5967
49+58 20	0.28492	0.03302	74.4710	Q56	4	-0.00480	0.9425	0.0970
20+27 25	0.10193	0.01492	46.6754	Q12	5	0.62926	0.8366	2688.9980
22+25 27	0.15171	0.02291	43.8515	Q14	7	0.13750	0.9503	79.0513
				Q15	8	-0.02394	0.9972	2.3515
				Q17	9	-0.11164	0.8837	51.7695
				Q16	10	0.04922	0.9858	9.9604
				Q23	11	0.04952	0.8054	10.0829
				Q26	12	0.05932	0.7255	14.4865
				Q27	13	0.05575	0.6498	12.7873
				Q28	14	0.02085	0.9753	1.7847
				Q29	15	-0.01898	0.9505	1.4780
				2+7	16	-0.07666	0.9885	24.2508
				5+6	18	0.01243	0.9706	0.6342
				8+9	19	0.02190	0.6770	1.9676
				61+62	21	0.04345	0.9315	7.7588
				14+15	22	0.04907	0.9897	9.8991
				14+17	23	0.00497	0.9747	0.1012
				18+26	24	0.07097	0.2639	20.7660
				21+24	26	-0.03752	0.4236	5.7822
				(E)	28	0.04880	0.8210	9.7904
				(P)	29	0.07835	0.9571	25.3352
				(F)	30	0.01738	0.9849	1.2396
				(I)	31	0.30787	0.9746	429.5148
				30+31	32	-0.03648	0.9910	5.4661

Table 5-9.   (Continued)

STEP NUMBER   6
VARIABLE ENTERED   10

MULTIPLE R   0.4647
STD. ERROR OF EST.   0.3237

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	118.373	19.729	188.318
RESIDUAL	4102	429.740	0.105	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04265)			.					
Q55 3	-0.10316	0.02055	25.2129	.	Q10	1	-0.01182	0.5496	0.5734
Q16 10	0.05704	0.01807	9.9634	.	Q32	2	0.04545	0.9855	8.4882
3X4 17	0.75373	0.02869	690.3279	.	Q56	4	-0.00148	0.9340	0.0090
49+58 20	0.27422	0.03315	68.4097	.	Q12	5	0.62829	0.8342	2674.6835
20+27 25	0.10245	0.01490	47.2476	.	Q14	7	0.13665	0.9499	78.0379
22+25 27	0.15176	0.02289	43.9753	.	Q15	8	-0.02352	0.9071	2.2708
				.	Q17	9	-0.11202	0.8837	52.1200
				.	Q23	11	0.05152	0.8042	10.9154
				.	Q26	12	0.05918	0.7255	14.4151
				.	Q27	13	0.05484	0.6496	12.3687
				.	Q28	14	0.01238	0.9449	0.6281
				.	Q29	15	-0.01208	0.9311	0.5985
				.	2+7	16	-0.07636	0.9884	24.0537
				.	5+6	18	0.00987	0.9679	0.3998
				.	8+9	19	0.01715	0.6704	1.2059
				.	61+62 21		0.04550	0.9300	8.5091
				.	14+15 22		0.04896	0.9897	9.8531
				.	14+17 23		0.00409	0.9744	0.0687
				.	18+26 24		0.07342	0.2633	22.2260
				.	21+24 26		-0.03752	0.4236	5.7860
				.	(E)	28	0.04645	0.8190	8.8662
				.	(P)	29	0.07769	0.9568	24.9007
				.	(F)	30	0.01544	0.9834	0.9778
				.	(I)	31	0.30582	0.9711	423.1303
				.	30+31 32		-0.03398	0.9882	4.7399

STEP NUMBER   7
VARIABLE ENTERED   22

MULTIPLE R   0.4667
STD. ERROR OF EST.   0.3233

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	119.403	17.058	163.171
RESIDUAL	4101	428.710	0.105	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.06066)			.					
Q55 3	-0.10398	0.02052	25.6847	.	Q10	1	-0.01083	0.9492	0.4810
Q16 10	0.05684	0.01805	9.9143	.	Q32	2	0.04661	0.9850	8.9253
3X4 17	0.75416	0.02866	692.5934	.	Q56	4	-0.00281	0.9373	0.0325
49+58 20	0.27102	0.03313	65.3022	.	Q12	5	0.62720	0.8271	2658.7338
14+15 22	0.06883	0.02193	9.8531	.	Q14	7	0.13505	0.5943	76.1720
20+27 25	0.10098	0.01490	45.9512	.	Q15	8	-0.13505	0.2400	76.1712
22+25 27	0.14647	0.02292	40.8312	.	Q17	9	-0.11225	0.8837	52.3207
				.	Q23	11	0.04776	0.7989	9.3744
				.	Q26	12	0.05643	0.7253	14.0476
				.	Q27	13	0.05368	0.6492	11.8476
				.	Q28	14	0.01037	0.9433	0.4412
				.	Q29	15	-0.01130	0.9308	0.5237
				.	2+7	16	-0.07867	0.9866	25.5314
				.	5+6	18	0.00833	0.9669	0.2842
				.	8+9	19	0.01705	0.6704	1.1923
				.	61+62 21		0.04433	0.9294	8.0713
				.	14+17 23		-0.01714	0.8156	1.2054
				.	18+26 24		0.07350	0.2633	22.2710
				.	21+24 26		-0.03755	0.4236	5.7881
				.	(E)	28	0.04154	0.8098	7.0870
				.	(P)	29	0.07831	0.9567	25.2999
				.	(F)	30	0.01648	0.9829	1.1139
				.	(I)	31	0.30548	0.9708	421.9778
				.	30+31 32		-0.03024	0.9821	3.7538

Table 5-9.   (Continued)

STEP NUMBER   9
VARIABLE ENTERED   20

MULTIPLE R   0.4682
STD. ERROR OF EST.   0.3231

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	120.143	15.018	143.873
RESIDUAL	4130	427.971	0.104	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.06959)								
255 3	-0.00576	0.02160	15.0355		010	1	-0.01065	0.9491	0.4452
016 12	0.05444	0.01806	9.3064		032	2	0.04331	0.9781	7.7036
3X4 17	0.75295	0.02864	691.2133		056	4	-0.00475	0.9353	0.0923
49+58 20	0.25123	0.03393	54.9514		012	5	0.62671	0.8262	2651.2496
14+15 22	0.06261	0.02204	9.3732		014	7	-0.13452	0.5941	75.5224
23+27 25	0.09544	0.01503	43.3277		015	8	-0.13450	0.2400	75.5221
22+25 27	0.14433	0.02291	43.6412		017	9	-0.11133	0.8832	51.4441
(E) 28	0.04827	0.01806	7.3070		023	11	0.04149	0.7775	7.5088
					026	12	0.05764	0.7250	13.6645
					027	13	0.05345	0.6491	11.7424
					028	14	0.01043	0.9433	6.4459
					029	15	-0.01060	0.9305	0.4510
					2+7	16	-0.07681	0.9842	24.3256
					5+6	18	0.00370	0.9548	0.0561
					8+9	19	0.01803	0.6700	1.3327
					61+62 21		0.03679	0.8922	5.5566
					14+17 23		-0.01667	0.8155	1.1393
					18+26 24		0.07032	0.2615	20.3472
					21+24 26		-0.03515	0.4221	5.0707
					(P)	29	0.07093	0.9097	20.7260
					(F)	30	0.01392	0.9791	0.7943
					(I)	31	0.30359	0.9662	416.1609
					30+31 32		-0.02940	0.9817	3.5464

STEP NUMBER   9
VARIABLE ENTERED   19

MULTIPLE R   0.4685
STD. ERROR OF EST.   0.3231

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	120.287	13.365	128.045
RESIDUAL	4099	427.832	0.104	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.07893)								
255 3	-0.10071	0.02510	15.1062		010	1	-0.00886	0.9393	0.3221
016 10	0.05235	0.01815	8.3179		032	2	0.04453	0.9743	8.1405
3X4 17	0.75654	0.02801	683.6237		056	4	-0.00313	0.9276	0.0401
8+9 19	0.03937	0.03039	1.3327		012	5	0.62665	0.8244	2669.8150
49+58 20	0.25238	0.03394	55.2932		014	7	0.13412	0.5938	75.0715
14+15 22	0.05249	0.02203	5.3422		015	8	-0.13412	0.2398	75.0707
20+27 25	0.09541	0.01503	43.5134		017	9	-0.11157	0.8830	41.6575
22+25 27	0.14663	0.02291	43.7657		023	11	0.04312	0.7717	7.6354
(E) 28	0.04955	0.01806	7.2252		026	12	0.05672	0.7227	13.2286
					027	13	0.05275	0.6480	11.4364
					028	14	0.00780	0.9217	0.2490
					029	15	-0.00911	0.9247	0.3399
					2+7	16	-0.07680	0.9842	24.3151
					5+6	18	0.00370	0.9548	0.0560
					61+62 21		0.03960	0.8759	6.4379
					14+17 23		-0.01711	0.8151	1.1997
					18+26 24		0.07049	0.2614	20.4621
					21+24 26		-0.03572	0.4217	5.2357
					(P)	29	0.07241	0.9051	21.5976
					(F)	30	0.01207	0.9680	0.5970
					(I)	31	0.30928	0.9627	421.1573
					30+31 32		-0.02937	0.9817	3.5380

Table 5-9. (Continued)

```
STEP NUMBER   10
VARIABLE ENTERED   1

MULTIPLE R          0.4685
STD. ERROR OF EST.  0.3231

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION  10        120.310          12.037      115.254
        RESIDUAL    4098       427.799           0.104
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.06856)			.					
Q10 1	-0.01187	0.02091	3.3221	.	Q32	2	0.04471	0.9739	8.2075
Q55 3	-0.10187	0.02518	15.3652	.	Q56	4	0.00410	0.9882	0.0687
Q16 10	0.05158	0.01820	8.0278	.	Q12	5	0.62678	0.8232	2650.9089
3X4 17	0.75684	0.02382	689.8358	.	Q14	7	0.13422	0.5937	75.1595
8+9 19	0.03331	0.03054	1.1894	.	Q15	8	-0.13422	0.2398	75.1587
49+58 20	0.25030	0.03414	53.7424	.	Q17	9	-0.11141	0.8826	51.4950
14+15 22	0.06224	0.02204	7.9748	.	Q23	11	0.04301	0.7716	7.5943
20+27 25	0.09587	0.01573	43.6651	.	Q26	12	0.05688	0.7225	13.2978
22+25 27	0.14609	0.02293	40.5939	.	Q27	13	0.05304	0.6475	11.5576
(E) 28	0.04848	0.01806	7.2037	.	Q28	14	0.00749	0.9206	0.2297
				.	Q29	15	-0.00492	0.6212	0.0990
				.	2+7	16	-0.07686	0.9842	24.3459
				.	5+6	18	0.00258	0.9390	0.0273
				.	61+62	21	0.03944	0.8755	6.3833
				.	14+17	23	-0.01691	0.8146	1.1715
				.	18+26	24	0.07029	0.2613	20.3425
				.	21+24	26	-0.03565	0.4217	5.2150
				.	(P)	29	0.07207	0.9031	21.3919
				.	(F)	30	0.01170	0.9662	0.5612
				.	(1)	31	0.30578	0.9616	422.5835
				.	30+31	32	-0.02975	0.9801	3.6293

```
STEP NUMBER   11
VARIABLE ENTERED   4

MULTIPLE R          0.4685
STD. ERROR OF EST.  0.3231

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION  11        120.323          10.938      104.759
        RESIDUAL    4097       427.791           0.104
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.07031)			.					
Q10 1	-0.01707	0.02882	0.3536	.	Q32	2	0.04484	0.9732	8.2513
Q55 3	-0.10149	0.02523	15.1839	.	Q12	5	0.62678	0.8231	2650.2706
Q56 4	0.00748	0.02852	0.3697	.	Q14	7	0.13422	0.5937	75.1443
Q16 10	0.05165	0.01821	8.0451	.	Q15	8	-0.13422	0.2398	75.1435
3X4 17	0.75644	0.02886	685.9730	.	Q17	9	-0.11145	0.8826	51.5126
8+9 19	0.03354	0.03056	1.2044	.	Q23	11	0.04304	0.7716	7.6022
49+58 20	0.25090	0.03422	53.7461	.	Q26	12	0.05695	0.7223	13.3277
14+15 22	0.06196	0.02207	7.8830	.	Q27	13	0.05307	0.6474	11.5695
20+27 25	0.09603	0.01505	40.7275	.	Q28	14	0.00769	0.9184	0.2425
22+25 27	0.14608	0.02293	40.5724	.	Q29	15	-0.00577	0.6000	0.1364
(E) 28	0.04816	0.01811	7.0741	.	2+7	16	-0.07689	0.9841	24.3623
				.	5+6	18	0.00277	0.9370	0.0315
				.	61+62	21	0.03971	0.8732	6.4686
				.	14+17	23	-0.01693	0.8146	1.1744
				.	18+26	24	0.07032	0.2613	20.3561
				.	21+24	26	-0.03564	0.4217	5.2095
				.	(P)	29	0.07245	0.8999	21.6134
				.	(F)	30	0.01199	0.9624	0.5885
				.	(1)	31	0.30564	0.9615	422.6624
				.	30+31	32	-0.02971	0.9800	3.6186

Table 5-9. (Continued)

STEP NUMBER 12
VARIABLE ENTERED 18

MULTIPLE R   0.4685
STD. ERROR OF EST.   0.3232

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	120.326	10.027	96.009
RESIDUAL	4096	427.787	0.104	

VARIABLES IN EQUATION

VARIABLE		COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT		-0.07372)		
Q10	1	-0.01675	0.02888	0.3352
Q55	3	-0.10165	0.02525	16.2133
Q56	4	0.00771	0.02855	0.0729
Q16	10	0.05153	0.01822	7.9953
3X4	17	0.75634	0.02887	685.3778
5+6	18	0.00506	0.02852	0.0315
8+9	19	0.03361	0.03057	1.2094
49+58	20	0.25024	0.03443	52.8292
14+15	22	0.06188	0.02208	7.8553
20+27	25	0.09637	0.01505	40.7413
22+25	27	0.14590	0.02296	40.3974
(E)	28	0.04779	0.01823	5.8717

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q32	2	0.04483	0.9732	8.2480
Q12	5	0.62680	0.8230	2649.9472
Q14	7	0.13426	0.5936	75.1728
Q15	8	-0.13426	0.2398	75.1720
Q17	9	-0.11149	0.8825	51.5374
Q73	11	0.04295	0.7690	7.5692
Q26	12	0.05691	0.7220	13.3050
Q27	13	0.05307	0.6474	11.5677
Q28	14	0.00762	0.9178	0.2380
Q29	15	-0.00563	0.5982	0.1296
2+7	16	-0.07750	0.9754	24.7444
61+62	21	0.03962	0.8709	6.4378
14+17	23	-0.01694	0.8146	1.1754
18+26	24	0.07027	0.2609	20.3199
21+24	26	-0.03577	0.4210	5.2477
(P)	29	0.07242	0.8997	21.5911
(F)	30	0.01184	0.9590	0.5744
(I)	31	0.30618	0.9600	423.5984
30+31	32	-0.02983	0.9786	3.6478

LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	3X4	17	0.4027	0.1622	0.1622	795.0509	1
2	20+27	25	0.4287	0.1838	0.0216	108.8013	2
3	49+58	20	0.4480	0.2007	0.0169	86.5519	3
4	22+25	27	0.4575	0.2096	0.0087	46.2590	4
5	Q55	3	0.4527	0.2141	0.0045	23.4041	5
6	Q16	10	0.4547	0.2160	0.0019	9.9604	6
7	14+15	22	0.4667	0.2178	0.0019	9.8531	7
8	(E)	28	0.4682	0.2192	0.0013	7.0870	8
9	8+9	19	0.4685	0.2194	0.0003	1.3327	9
10	Q10	1	0.4685	0.2195	0.0001	0.3221	10
11	Q56	4	0.4685	0.2195	0.0000	0.0687	11
12	5+6	18	0.4685	0.2195	0.0000	0.0315	12

Table 5-10. Location of First Source of Information

```
SUB-PROBLM   5                                              Location of First Source for Information
DEPENDENT VARIABLE        Q14
MAXIMUM NUMBER OF STEPS     64
F-LEVEL FOR INCLUSION    0.030000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER   1
VARIABLE ENTERED   25

MULTIPLE R          0.1771
STD. ERROR OF EST.  0.2304

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
    REGRESSION    1        7.065           7.065       133.053
    RESIDUAL    4107      219.082          0.053
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.18363)								
20+27 25	0.11424	0.00990	133.0528		U10	1	-0.02743	0.9997	3.0914
					Q32	2	0.03682	0.9914	5.5749
					Q55	3	0.04771	0.9806	9.3674
					Q56	4	0.00068	1.0000	0.0019
					Q12	5	0.20032	0.9617	171.6630
					Q13	6	0.14512	0.9632	88.3358
					Q15	8	0.14490	0.9985	88.0532
					Q17	9	-0.03016	0.9041	3.7392
					Q16	10	0.02978	0.9997	3.6447
					Q23	11	0.06632	0.8326	18.1374
					Q26	12	0.08450	0.7321	29.5281
					Q27	13	0.09682	0.6549	38.8536
					Q28	14	0.08028	0.9998	26.6326
					Q29	15	-0.04205	0.9982	7.2732
					2+7	16	0.09201	0.9999	35.0588
					3X4	17	0.01992	0.9872	1.6256
					5+6	18	0.02850	0.9993	3.3370
					P+x	19	0.03886	0.9868	6.2103
					49+58	20	0.06037	0.9979	15.0168
					61+62	21	0.04830	0.9781	9.6010
					14+15	22	0.61457	0.9965	2492.1062
					14+17	23	0.63764	0.9829	2813.2071
					18+26	24	0.05455	0.2721	12.2528
					21+24	26	0.05319	0.9245	11.6512
					22+25	27	0.11164	0.8858	51.8163
					(E)	28	0.07243	0.9618	21.6513
					(P)	29	0.03968	0.9916	6.4736
					(F)	30	0.02519	1.0000	2.6071
					(I)	31	0.08852	0.9982	32.4310
					30+31	32	-0.07859	0.9979	25.5194

```
STEP NUMBER   2
VARIABLE ENTERED   8

MULTIPLE R          0.2274
STD. ERROR OF EST.  0.2280

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
    REGRESSION    2       11.644           5.822       111.963
    RESIDUAL    4106      213.504          0.052
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.14253)								
Q15 8	0.09070	0.00967	88.0532		Q10	1	-0.02495	0.9993	2.5568
20+27 25	0.11777	0.00981	144.1824		Q32	2	0.04397	0.9893	7.9507
					Q55	3	0.05104	0.9803	10.7213
					Q56	4	-0.00264	0.9994	0.0286
					Q12	5	0.20230	0.9617	175.1606
					Q13	6	0.15005	0.9627	94.5574

Q17	9	-0.03196	0.9040	4.1976
Q16	10	0.03144	0.9996	4.0617
Q23	11	0.05662	0.8283	13.2013
Q26	12	0.08875	0.7317	32.5934
Q27	13	0.10095	0.6546	42.2627
Q28	14	0.08048	0.9998	26.8978
Q29	15	-0.04181	0.9982	7.1884
2+7	16	0.09325	0.9999	36.0065
3X4	17	0.02237	0.9869	2.0554
5+6	18	0.02389	0.9982	2.3433
8+9	19	0.04195	0.9865	7.2354
49+58	20	0.05989	0.9979	14.7756
61+62	21	0.04799	0.9781	9.4761
14+15	22	1.00000	0.2430	***********
14+17	23	0.63268	0.9723	2739.8525
18+26	24	0.05815	0.2719	13.9255
21+24	26	0.04859	0.9233	9.7136
22+25	27	0.10932	0.8853	49.6519
(E)	28	0.06097	0.9548	15.3184
(P)	29	0.04443	0.9907	8.1204
(F)	30	0.03107	0.9985	3.9657
(I)	31	0.09403	0.9973	36.6165
30+31	32	-0.07337	0.9962	22.2202

STEP NUMBER   3
VARIABLE ENTERED   27

MULTIPLE R   0.2511
STD. ERROR OF EST.   0.2267

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	14.195	4.732	92.077
RESIDUAL	4105	210.952	0.051	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08747)							
Q15 8	0.08906	0.00961	85.8612		Q10 1	-0.02143	0.9982	1.8852
20+27 25	0.09305	0.01036	83.6398		Q32 2	0.03747	0.9855	5.7707
22+25 27	0.11212	0.01591	49.6519		Q55 3	0.05772	0.9771	13.7183
					Q56 4	-0.00129	0.9993	0.0068
					Q12 5	0.18651	0.9293	147.9083
					Q13 6	0.13682	0.9436	78.2885
					Q17 9	-0.01721	0.8870	1.2158
					Q16 10	0.03135	0.9996	4.0376
					Q23 11	0.04061	0.8089	6.7789
					Q26 12	0.08134	0.7276	27.3359
					Q27 13	0.09496	0.6521	37.3456
					Q28 14	0.08468	0.9988	29.6405
					Q29 15	-0.03894	0.9974	.2325
					2+7 16	0.09308	0.9998	1.8705
					3X4 17	0.01264	0.9789	0.6555
					5+6 18	0.01756	0.9947	1.2660
					8+9 19	0.04869	0.9831	9.7531
					49+58 20	0.05284	0.9932	11.4902
					61+62 21	0.04243	0.9753	7.4018
					14+15 22	1.00000	0.2401	***********
					14+17 23	0.64068	0.9712	2057.4160
					18+26 24	0.04223	0.2656	7.3318
					21+24 26	-0.04732	0.4234	9.2115
					(E) 28	0.05637	0.9528	13.0036
					(P) 29	0.03788	0.9860	5.8959
					(F) 30	0.03088	0.9985	3.9171
					(I) 31	0.08689	0.9921	31.2233
					30+31 32	-0.08150	0.9915	27.4420

Table 5-10. (Continued)

```
STEP NUMBER    4
VARIABLE ENTERED  16

MULTIPLE R            0.2668
STD. ERROR OF EST.    0.2257

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   4        16.023          4.006       78.612

        RESIDUAL   4104       209.124          C.051
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT | 0.03313)			.	Q10	1	-0.02017	0.9980	1.6701
Q15 8	0.08917	0.00957	85.8018	.	Q32	2	0.03617	0.9853	5.3761
2+7 16	0.11837	0.01976	35.9735	.	Q55	3	0.05291	0.9741	11.5176
20+27 25	0.09255	0.01032	83.4398	.	Q56	4	-0.00068	0.9992	0.0019
22+25 27	0.11149	0.01584	49.5121	.	Q12	5	0.18703	0.9293	148.7260
				.	Q13	6	0.14147	0.9419	83.7957
				.	Q17	9	-0.01862	0.8868	1.4224
				.	Q16	10	0.03183	0.9996	4.1602
				.	Q23	11	0.04560	0.8068	8.5492
				.	Q26	12	0.07898	0.7270	25.7545
				.	Q27	13	0.09179	0.6511	34.8608
				.	Q28	14	0.08105	0.9969	27.1324
				.	Q29	15	-0.03836	0.9973	6.0468
				.	3X4	17	0.00545	0.9730	0.1217
				.	5+6	18	0.00909	0.9863	0.3387
				.	8+9	19	0.04692	0.9827	9.0541
				.	49+58	20	C.05164	0.9929	10.9702
				.	61+62	21	0.04830	0.9718	9.5960
				.	14+15	22	1.00000	0.2590	************
				.	14+17	23	0.63840	0.9662	2822.6005
				.	18+26	24	0.04300	0.2656	7.6013
				.	21+24	26	-0.04526	0.4231	8.4231
				.	(E)	28	0.06164	0.9502	15.6486
				.	(P)	29	0.04005	0.9863	6.5919
				.	(F)	30	0.02751	0.9971	3.1085
				.	(I)	31	0.08807	0.7920	32.0732
				.	30+31	32	-0.07947	0.9909	26.0740

```
STEP NUMBER    5
VARIABLE ENTERED  28

MULTIPLE R            0.2733
STD. ERROR OF EST.    0.2253

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   5        16.818          3.364       65.244
        RESIDUAL   4103       208.330          0.051
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT | 0.02685)			.	Q10	1	-0.02133	0.9977	1.8675
Q15 8	0.08599	0.00959	83.4232	.	Q32	2	0.03058	0.9766	3.8392
2+7 16	0.12249	0.01976	38.4442	.	Q55	3	0.07601	0.8797	23.8340
20+27 25	0.08535	0.01046	66.5839	.	Q56	4	-0.00540	0.9934	0.1194
22+25 27	0.10860	0.01583	47.3458	.	Q12	5	0.18251	0.9216	141.3479
(E) 28	0.04599	0.01163	15.6436	.	Q13	6	0.13574	0.9304	76.9967
				.	Q17	9	-0.01675	0.8859	1.1517
				.	Q16	10	0.02879	0.9971	3.4033
				.	Q23	11	0.03491	0.7794	5.0057
				.	Q26	12	0.07714	0.7262	24.5577
				.	Q27	13	0.09069	0.6508	34.0152
				.	Q28	14	0.08172	0.9968	27.5774
				.	Q.	15	-0.03838	0.9973	6.0526
				.	3X4	17	0.00195	0.9699	0.0156
				.	5+6	18	0.00054	0.9673	0.0012
				.	8+9	19	0.05974	0.9477	14.6929
				.	49+58	20	0.03880	0.9424	6.1854
				.	61+62	21	0.03369	0.9079	4.6604
				.	14+15	22	1.00000	0.2371	************
				.	14+17	23	0.63869	0.9659	2826.1728
				.	18+26	24	0.03704	0.2629	5.6354
				.	21+24	26	-0.04152	0.4214	7.0824
				.	(P)	29	0.02443	0.9151	2.4502
				.	(F)	30	0.02572	0.9962	2.7162
				.	(I)	31	C.08224	0.9812	27.9330
				.	30+31	32	-0.07873	0.9907	25.5849

Table 5-10.   (Continued)

STEP NUMBER   6
VARIABLE ENTERED   3

MULTIPLE R   0.2829
STD. ERROR OF EST.   0.2247

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	18.021	3.004	59.483
RESIDUAL	4102	207.126	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.01119)								
Q55 3	0.07219	0.01479	23.8340		Q10	1	-0.00868	0.9604	0.3090
Q15 8	0.08557	0.00956	80.0934		Q32	2	0.03174	0.9764	4.1354
2+7 16	0.11859	0.01972	36.1727		Q56	4	0.00877	0.9598	0.3155
20+27 25	0.08849	0.01045	71.5929		Q12	5	0.18693	0.9174	148.4921
22+25 27	0.11211	0.01581	50.3078		Q13	6	0.14510	0.9198	88.1968
(E) 28	0.06453	0.01220	27.9754		Q17	9	-0.01901	0.8852	1.4828
					Q16	10	0.02305	0.9911	2.1796
					Q23	11	0.03760	0.7785	5.8056
					Q26	12	0.07584	0.7259	23.7240
					Q27	13	0.08941	0.6505	33.0475
					Q28	14	0.07277	0.9804	21.8345
					Q29	15	-0.02531	0.9656	2.6289
					3X4	17	0.01445	0.9446	0.8567
					5+6	18	-0.00401	0.9639	0.0661
					8+9	19	0.02327	0.6849	2.2210
					49+58	20	0.03589	0.9409	5.2893
					61+62	21	0.04316	0.8950	7.6538
					14+15	22	1.00000	0.2357	************
					14+17	23	0.63671	0.9609	2796.1364
					18+26	24	0.03960	0.2626	6.4406
					21+24	26	-0.04092	0.4214	6.8770
					(P)	29	0.02793	0.9133	3.2014
					(F)	30	0.01585	0.9788	1.0309
					(I)	31	0.08731	0.9775	31.5030
					30+31	32	-0.07757	0.9903	24.8246

STEP NUMBER   7
VARIABLE ENTERED   20

MULTIPLE R   0.2850
STD. ERROR OF EST.   0.2246

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	18.288	2.613	51.794
RESIDUAL	4101	206.860	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.02170)								
Q55 3	0.07083	0.01479	22.9237		Q10	1	-0.00461	0.9567	0.0872
Q15 8	0.08587	0.00956	80.7240		Q32	2	0.03242	0.9761	4.3131
2+7 16	0.11739	0.01971	35.4532		Q56	4	0.01357	0.9435	0.7546
49+58 20	0.05392	0.02344	5.2893		Q12	5	0.18443	0.9107	144.3656
20+27 25	0.08891	0.01045	72.4357		Q13	6	0.14266	0.9131	85.1733
22+25 27	0.10988	0.01583	48.1932		Q17	9	-0.02002	0.8845	1.6446
(E) 28	0.05800	0.01252	21.4531		Q16	10	0.01993	0.9832	1.6300
					Q23	11	0.03810	0.7784	5.9616
					Q26	12	0.07432	0.7244	22.7698
					Q27	13	0.08778	0.6489	31.8358
					Q28	14	0.07016	0.9741	20.2842
					Q29	15	-0.02095	0.9501	1.7997
					3X4	17	0.01717	0.9394	1.2085
					5+6	18	-0.00864	0.9484	0.3060
					8+9	19	0.02363	0.6849	2.3001
					61+62	21	0.04163	0.8937	7.1871
					14+15	22	1.00000	0.2354	************
					14+17	23	0.63616	0.9590	2787.2143
					18+26	24	0.03967	0.2626	6.4639
					21+24	26	-0.04119	0.4214	6.9686
					(P)	29	0.02540	0.9085	2.6476
					(F)	30	0.01554	0.9787	0.9907
					(I)	31	0.08719	0.9775	31.4085
					30+31	32	-0.07927	0.9884	25.9243

Table 5-10.　(Continued)

STEP NUMBER　8
VARIABLE ENTERED　19

MULTIPLE R　　　　　　　3.2859
STD. ERROR OF EST.　　0.2246

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	18.404	2.300	45.622
RESIDUAL	4100	206.744	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03086)							
Q55　3	0.05694	0.01740	13.7128		Q10　1	-0.00197	0.9447	0.0160
Q15　8	0.08597	0.00956	80.9252		Q32　2	0.03401	0.9721	4.7468
2+7　16	0.11773	0.01971	35.6714		Q56　4	0.01608	0.9336	1.0604
8+9　19	0.03168	0.02089	2.3031		Q12　5	0.18409	0.9104	143.7849
49+58 20	0.05431	0.02344	5.3677		Q13　6	0.14323	0.9127	85.8529
20+27 25	0.08937	0.01045	73.1427		Q17　9	-0.02044	0.8843	1.7141
22+25 27	0.11061	0.01583	45.8137		Q16　10	0.01767	0.9734	1.2797
(E)　28	0.05836	0.01252	21.7296		Q23　11	0.04028	0.7727	6.6626
					Q26　12	0.07317	0.7223	22.0635
					Q27　13	0.08691	0.6478	31.2004
					Q28　14	0.06722	0.9480	18.6029
					Q29　15	-0.01882	0.9418	1.4521
					3X4　17	0.01988	0.9282	1.6198
					5+6　18	-0.00875	0.9483	0.3138
					61+62 21	0.04571	0.8753	8.5824
					14+15 22	1.00000	0.2353	************
					14+17 23	0.63592	0.9582	2783.0011
					18+26 24	0.04016	0.2625	6.6223
					21+24 26	-0.04193	0.4210	7.2189
					(P)　29	0.02720	0.9037	3.0356
					(F)　30	0.01299	0.9666	0.6922
					(I)　31	0.08893	0.9734	32.6766
					30+31 32	-0.07903	0.9883	25.7608

STEP NUMBER　9
VARIABLE ENTERED　17

MULTIPLE R　　　　　　　0.2865
STD. ERROR OF EST.　　0.2245

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	18.486	2.054	40.739
RESIDUAL	4099	206.662	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03424)							
Q55　3	0.05870	0.01745	11.3178		Q10　1	-0.00228	0.9445	0.0213
Q15　8	0.08625	0.00956	81.4240		Q32　2	0.03378	0.9719	4.6828
2+7　16	0.11547	0.01979	34.0446		Q56　4	0.01513	0.9314	0.9387
3X4　17	0.02559	0.02011	1.6198		Q12　5	0.18648	0.8323	147.6438
8+9　19	0.03460	0.02101	2.7112		Q13　6	0.14685	0.7787	90.3238
49+58 20	0.05657	0.02351	5.7920		Q17　9	-0.01962	0.8827	1.5788
20+27 25	0.08868	0.01046	71.8396		Q16　10	0.01759	0.9734	1.2688
22+25 27	0.10894	0.01589	47.0251		Q23　11	0.04044	0.7727	6.7141
(E)　28	0.05837	0.01252	21.5064		Q26　12	0.07268	0.7218	21.7651
					Q27　13	0.08644	0.6474	30.8492
					Q28　14	0.06665	0.9471	18.2873
					Q29　15	-0.01903	0.9417	1.4844
					5+6　18	-0.00888	0.9483	0.3234
					61+62 21	0.04525	0.8748	8.4069
					14+15 22	1.00000	0.2352	************
					14+17 23	0.63656	0.9578	2791.7845
					18+26 24	0.03920	0.2618	6.3067
					21+24 26	-0.04214	0.4210	7.2916
					(P)　29	0.02698	0.9036	2.9850
					(F)　30	0.01323	0.9665	0.7174
					(I)　31	0.08748	0.9650	31.6004
					30+31 32	-0.07968	0.9874	26.1859

Table 5-10. (Continued)

STEP NUMBER   10
VARIABLE ENTERED   10

MULTIPLE R   0.2870
STD. ERROR OF EST.   0.2245

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	18.550	1.855	36.794
RESIDUAL	4098	206.598	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04089)							
Q55 3	0.05849	0.01745	11.2344		Q10 1	-0.00097	0.9392	0.0038
Q15 8	0.08638	0.00956	81.6678		Q32 2	0.03364	0.9719	4.6421
Q16 10	0.01421	0.01262	1.2688		Q56 4	0.01626	0.9278	1.0031
2+7 16	0.11560	0.01979	34.1236		Q12 5	0.18590	0.8305	146.6511
3X4 17	0.02551	0.02011	1.6089		Q13 6	0.14624	0.7772	89.5338
8+9 19	0.03223	0.02112	2.3296		Q17 9	-0.01972	0.8826	1.5941
49+58 20	0.05416	0.02360	5.2643		Q23 11	0.04118	0.7715	6.9580
20+27 25	0.08887	0.01046	72.1356		Q26 12	0.07274	0.7218	21.7947
22+25 27	0.13892	0.01589	47.0138		Q27 13	0.08619	0.6472	30.6652
(E) 28	0.05732	0.01254	23.9039		Q28 14	0.06446	0.9219	17.2009
					Q29 15	-0.01683	0.9240	1.1403
					5+6 18	-0.00974	0.9461	0.3886
					61+62 21	0.04596	0.8735	8.6716
					14+15 22	1.00000	0.2351	••••••••••••
					14+17 23	0.63646	0.9576	2789.6518
					18+26 24	0.04014	0.2612	6.6102
					21+24 26	-0.04214	0.4210	7.2872
					(P) 29	0.02679	0.9035	2.9426
					(F) 30	0.01277	0.9658	0.6687
					(I) 31	0.08656	0.9612	30.9302
					30+31 32	-0.07890	0.9848	25.6613

STEP NUMBER   11
VARIABLE ENTERED   4

MULTIPLE R   0.2875
STD. ERROR OF EST.   0.2245

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	11	18.604	1.691	33.548
RESIDUAL	4097	206.543	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.05347)							
Q55 3	0.06027	0.01753	11.8151		Q10 1	-0.01675	0.4944	1.1497
Q56 4	0.01496	0.01438	1.0831		Q32 2	0.03373	0.9718	4.6659
Q15 5	0.08621	0.00956	81.3338		Q12 5	0.18618	0.8304	147.0796
Q16 10	0.01503	0.01264	1.4131		Q13 6	0.14628	0.7772	89.5665
2+7 16	0.11554	0.01979	34.0898		Q17 9	-0.02005	0.8823	1.6468
3X4 17	0.02440	0.02013	1.4791		Q23 11	0.04140	0.7714	7.0311
8+9 19	0.03422	0.02120	2.6054		Q26 12	0.07274	0.7218	21.7879
49+58 20	0.05718	0.02378	5.7816		Q27 13	0.08596	0.6471	30.4941
20+27 25	0.08912	0.01047	72.4970		Q28 14	0.06573	0.9188	17.7744
22+25 27	0.10932	0.01589	47.3336		Q29 15	-0.02896	0.6901	3.4387
(E) 28	0.05673	0.01255	23.4252		5+6 18	-0.00781	0.9320	0.2497
					61+62 21	0.04685	0.8713	9.0088
					14+15 22	1.00000	0.2351	••••••••••••
					14+17 23	0.63634	0.9570	2787.1514
					18+26 24	0.04051	0.2611	6.7327
					21+24 26	-0.04218	0.4210	7.3008
					(P) 29	0.02811	0.8982	3.2394
					(F) 30	0.01404	0.9603	0.8074
					(I) 31	0.08630	0.9609	30.7374
					30+31 32	-0.07837	0.9835	25.3143

Table 5-10. (Continued)

STEP NUMBER 12
VARIABLE ENTERED 1

MULTIPLE R 0.2879
STD. ERROR OF EST. 0.2245

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	18.662	1.555	30.850
RESIDUAL	4096	206.485	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04690)							
Q10 1	-0.02147	0.02003	1.1497		Q32 2	0.03429	0.9708	4.8204
Q55 3	0.05990	0.01754	11.6673		Q12 5	0.18569	0.8291	146.2432
Q56 4	0.02958	0.01981	2.2290		Q13 6	0.14609	0.7770	89.3029
Q15 8	0.08575	0.00957	83.2938		Q17 9	-0.01986	0.8822	1.6158
Q16 10	0.01442	0.01265	1.2999		Q23 11	0.04130	0.7713	6.9959
2+7 16	0.11529	0.01979	33.9375		Q26 12	0.07312	0.7215	22.0103
3X4 17	0.02394	0.02014	1.4133		Q27 13	0.08642	0.6467	35.8123
8+9 19	0.03297	0.02123	2.4110		Q28 14	0.06585	0.9187	17.8345
49+58 20	0.05636	0.02379	5.6098		Q29 15	-0.02457	0.6001	2.4744
20+27 25	0.08945	0.01047	72.9856		5+6 18	-0.00885	0.9285	0.3210
22+25 27	0.10875	0.01590	46.7951		61+62 21	0.04720	0.8709	9.1430
(E) 28	0.05601	0.01257	19.8540		14+15 22	1.00000	0.2350	••••••••••••
					14+17 23	0.63639	0.9570	2787.2869
					18+23 24	0.04028	0.2610	6.6548
					21+24 26	-0.04204	0.4209	7.2494
					(P) 29	0.02822	0.8982	3.2641
					(F) 30	0.01425	0.9602	0.8319
					(I) 31	0.08685	0.9601	31.1261
					30+31 32	-0.07874	0.9831	25.5500

STEP NUMBER 13
VARIABLE ENTERED 30

MULTIPLE R 0.2882
STD. ERROR OF EST. 0.2245

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	13	18.704	1.439	28.539
RESIDUAL	4095	206.443	0.050	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04813)							
Q10 1	-0.02170	0.02003	1.1742		Q32 2	0.03409	0.9706	4.7630
Q55 3	0.05916	0.01756	11.3558		Q12 5	0.18538	0.8284	145.7036
Q56 4	0.03072	0.01985	2.3951		Q13 6	0.14594	0.7769	89.0909
Q15 8	0.08609	0.00958	83.8136		Q17 9	-0.02015	0.8618	1.6623
Q16 10	0.01417	0.01256	1.2527		Q23 11	0.04131	0.7713	6.9978
2+7 16	0.11463	0.01980	33.4999		Q26 12	0.07342	0.7212	22.1885
3X4 17	0.02408	0.02014	1.4330		Q27 13	0.08677	0.6464	31.0543
8+9 19	0.03103	0.02134	2.1135		Q28 14	0.06600	0.9187	17.9100
49+58 20	0.05640	0.02379	5.6180		Q29 15	-0.02398	0.5990	2.3564
20+27 25	0.08946	0.01047	72.9830		5+6 18	-0.00968	0.9255	0.3833
22+25 27	0.10860	0.01590	46.6639		61+62 21	0.04707	0.8709	9.0908
(E) 28	0.05518	0.01260	19.1738		14+15 22	1.00000	0.2349	••••••••••••
(F) 30	0.02443	0.02679	0.8319		14+17 23	0.63630	0.9564	2785.2289
					18+26 24	0.04026	0.2610	6.6480
					21+24 26	-0.04226	0.4208	7.3245
					(P) 29	0.02789	0.8977	3.1875
					(I) 31	0.08669	0.9999	31.0024
					30+31 32	-0.07893	0.9830	25.6447

Table 5-10.   (Continued)

STEP NUMBER   14
VARIABLE ENTERED   18

MULTIPLE R   0.2884
STD. ERROR OF EST.   0.2245

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	14	18.723	1.337	26.524
RESIDUAL	4094	206.424	0.050	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.1.043)						
Q10 1	-0.02247	0.02007	1.2541	Q32 2	0.03408	0.9706	4.7603
Q55 3	0.05947	0.01756	11.4547	Q12 5	0.18557	0.0282	145.9700
Q56 4	0.03018	0.01987	2.3072	Q13 6	0.14606	0.7758	89.2181
Q15 8	0.08624	0.00958	81.0251	Q17 9	-0.02006	0.8818	1.6481
Q16 10	0.01445	0.01267	1.302C	Q23 11	0.04198	0.7684	7.2273
2+7 16	0.11577	0.01989	33.9721	J26 12	0.07361	0.7210	22.2586
3X4 17	0.02423	0.020'4	1.4457	Q27 13	0.08675	0.6464	31.0357
5+6 18	-0.01234	0.01994	0.3833	Q28 14	0.06625	0.9181	18.0460
8+9 19	0.03077	0.02135	2.0772	Q29 15	-0.02454	0.5972	2.4671
49+58 20	0.05797	0.02393	5.8677	61+62 21	0.04769	0.8681	9.3297
20+27 25	0.08937	0.01047	72.8237	14+15 22	1.00000	0.2349	************
22+25 27	0.10932	0.01591	45.9291	14+17 23	0.63633	0.9564	2785.0598
(E) 28	0.05639	0.01269	19.5426	18+26 24	0.04064	0.2607	6.7729
(F) 30	0.02537	0.02683	0.8941	21+24 26	-0.04191	0.4201	7.2003
				(P) 29	0.02802	0.8976	3.2153
				(I) 31	0.08639	0.9586	30.7785
				30+31 32	-0.07862	0.9815	25.4542

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	20+27	25	0.1771	0.0314	0.0314	133.0528	1
2	Q15	8	0.2274	0.0517	0.0203	88.0532	2
3	22+25	27	0.2511	0.0630	0.0113	49.6519	3
4	2+7	16	0.2668	0.0712	0.0081	35.8705	4
5	(E)	28	0.2733	0.0747	0.0035	15.6486	5
6	Q55	3	0.2829	0.0800	0.0053	23.8340	6
7	49+58	20	0.2852	0.0812	0.0012	5.2893	7
8	8+9	19	0.2859	0.0817	0.0005	2.3001	8
9	3X4	17	0.2865	0.0821	0.0004	1.6198	9
10	Q16	10	0.2870	0.0824	0.0003	1.2688	10
11	Q56	4	0.2675	0.0826	0.0002	1.0831	11
12	Q10	1	0.2879	0.0829	0.0003	1.1497	12
13	(F)	30	0.2882	0.0831	0.0002	0.8319	13
14	5+6	18	0.2884	0.0832	0.0001	0.3833	14

Table 5-11. Desired Class of Information

```
SUB-PROBLM    1
DEPENDENT VARIABLE        Q16
MAXIMUM NUMBER OF STEPS     6.
F-LEVEL FOR INCLUSION    0.00000
F-LEVEL FOR DELETION     0.00000C
TOLERANCE LEVEL          0.001000


STEP NUMBER    1
VARIABLE ENTERED   19

MULTIPLE R            0.1130
STD. ERROR OF EST.    0.2797

ANALYSIS OF VARIANCE
                       DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
          REGRESSION    1          4.152          4.152       53.082
          RESIDUAL    4107        321.215         0.078
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.52495)			:				
8+9 19	0.15684	0.02153	53.3824	:	Q10 1	-0.08662	0.9679	31.0428
				:	Q32 2	0.01339	0.9919	0.7359
				:	Q55 3	-0.00503	0.6875	0.1040
				:	Q56 4	-0.07091	0.7638	23.7473
				:	Q12 5	0.05784	0.9964	13.7930
				:	Q13 6	0.05450	0.9854	12.2697
				:	Q14 7	0.02434	0.9997	2.4782
				:	Q15 8	-0.00701	0.9998	0.2024
				:	Q17 9	0.00547	0.7962	9.1228
				:	Q23 11	-0.02522	0.9726	2.6136
				:	Q26 12	0.00277	0.9996	0.0315
				:	Q27 13	0.01603	0.9986	1.3559
				:	Q28 14	0.17395	0.9596	123.0259
				:	Q29 15	-0.14675	0.9715	90.3755
				:	2+7 16	-0.00601	0.9996	0.1484
				:	3X4 17	-0.00242	0.9619	0.0240
				:	5+6 18	0.06835	1.0000	19.2699
				:	49+58 20	0.10522	0.9984	45.9706
				:	61+62 21	-0.01685	0.9427	1.1678
				:	14+15 22	0.00684	1.0000	0.1920
				:	14+17 23	0.02078	0.9947	1.7743
				:	18+26 24	-0.02432	0.9834	2.4338
				:	20+27 25	-0.00351	0.9868	0.0507
				:	21+24 26	0.00227	0.9972	0.0212
				:	22+25 27	0.00728	0.9912	0.2178
				:	(E) 28	0.07151	0.9559	21.1351
				:	(P) 29	0.03581	0.9793	5.2738
				:	(F) 30	0.03216	0.9761	4.2523
				:	(I) 31	0.06882	0.9874	19.5366
				:	30+31 32	-0.04688	0.9998	9.0440

```
STEP NUMBER    2
VARIABLE ENTERED   20

MULTIPLE R            0.1539
STD. ERROR OF EST.    0.2781

ANALYSIS OF VARIANCE
                       DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
          REGRESSION    2          7.708          3.854       49.817
          RESIDUAL    4106        317.658         0.077
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.47058)			:				
8+9 19	0.16266	0.02143	57.6226	:	Q10 1	-0.07469	0.9533	23.0274
49+58 20	0.19110	0.32818	45.7736	:	Q32 2	0.01264	0.9919	3.6555
				:	Q55 3	-0.00254	0.6871	0.0265
				:	Q56 4	-0.05862	0.9490	14.1557
				:	Q12 5	0.04501	0.9801	8.3340
				:	Q13 6	0.04325	0.9729	7.6918

Table 5-11. (Continued)

.	Q14	7	0.01792	0.9950	1.2637
.	Q15	8	-0.00763	0.9998	0.2389
.	Q17	9	0.00550	0.9962	0.1241
.	Q23	11	-0.03033	0.9785	3.7887
.	Q26	12	-0.00488	0.9963	0.0978
.	Q27	13	0.00845	0.9933	0.2928
.	Q28	14	0.16269	0.9519	111.6304
.	Q29	15	-0.13435	0.9533	75.4625
.	2+7	16	-0.00785	0.9993	0.2531
.	3X6	17	0.00393	0.9584	0.3633
.	5+6	18	0.09237	0.9761	11.2004
.	61+62	21	-0.02665	0.9350	2.9167
.	14+15	22	0.00277	0.9985	0.0316
.	14+17	23	0.01510	0.9926	1.8643
.	18+26	24	-0.02977	0.9909	3.6414
.	20+27	25	-0.00791	0.7951	2.2508
.	21+24	26	-0.00341	0.9963	0.3477
.	22+25	27	-0.00078	0.9854	0.0025
.	(E)	28	0.04909	3.9863	9.9176
.	(P)	29	0.62251	0.9629	2.3010
.	(F)	30	0.02046	0.9753	3.5063
.	(I)	31	0.26627	0.9067	18.1376
.	30+31	32	-0.05137	0.9982	18.0629

STEP NUMBER 3
VARIABLE ENTERED 1

MULTIPLE R   0.1707
STD. ERROR OF EST.   0.2774

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	9.482	3.160	41.065
RESIDUAL	4105	315.886	0.077	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.53939						
Q10 1	-0.00551	0.01782	23.3274	Q32 2	0.01393	0.9916	0.7961
8+9 19	0.14334	0.02175	43.4442	Q55 3	-0.00873	0.6825	0.3129
49+58 20	0.17442	0.02032	37.9226	Q56 4	-0.00982	0.4971	0.3956
				Q12 5	0.04253	0.9789	7.4367
				Q13 6	0.04316	0.9729	7.6586
				Q14 7	0.01662	0.9949	1.1333
				Q15 8	-0.00930	0.9993	0.3547
				Q17 9	0.00714	0.9938	0.2094
				Q23 11	-0.03148	0.9703	4.0717
				Q26 12	-0.00385	0.9962	0.0638
				Q27 13	0.01015	0.9928	0.4228
				Q28 14	0.15977	0.9498	137.4965
				Q29 15	-0.11207	0.6325	52.1972
				2+7 16	-0.00856	0.9992	0.3034
				3X6 17	0.00535	0.9581	0.1174
				5+6 18	0.04281	0.9566	7.5351
				61+62 21	-0.02765	0.9349	3.1430
				14+15 22	0.00099	0.9979	0.0045
				14+17 23	0.01682	0.9926	1.1610
				18+26 24	-0.03063	0.9800	3.8530
				20+27 25	-0.00777	0.9851	0.2477
				21+24 26	-0.00490	0.9939	0.3987
				22+25 27	-0.00338	0.9842	0.0469
				(E) 28	0.04988	0.9062	10.2362
				(P) 29	0.01925	0.9610	1.5214
				(F) 30	0.02597	0.9731	2.7762
				(I) 31	0.06878	0.9858	19.5055
				30+31 32	-0.05420	0.9970	12.0930

Table 5-11.   (Continued)

STEP NUMBER   4
VARIABLE ENTERED   18

MULTIPLE R   0.1758
STD. ERROR OF EST.   0.2772

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	10.059	2.515	32.732
RESIDUAL	4104	315.307	0.077	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.49093)		
Q10 1	-0.07886	0.01797	19.2635
5+6 18	0.06646	0.02421	7.5351
8+9 19	0.14435	0.02173	44.1176
49+58 20	0.14302	0.02860	32.4734

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q32	2	0.01324	0.9913	0.7194
Q55	3	-0.00891	0.6825	0.3256
Q56	4	-0.00829	0.4965	0.2821
Q12	5	0.04105	0.9776	6.9255
Q13	6	0.04214	0.9723	7.2982
Q14	7	0.01575	0.9945	1.0136
Q15	8	-0.01057	0.9984	0.4587
Q17	9	0.00735	0.9937	0.2217
Q23	11	-0.03516	0.9637	5.0774
Q26	12	-0.00526	0.9931	0.1136
Q27	13	0.00945	0.9925	0.3665
Q28	14	0.15845	0.9485	105.6707
Q29	15	-0.10946	0.6295	49.7552
2+7	16	-0.01248	0.9911	3.6395
3X4	17	0.00436	0.9576	0.0770
61+62 21		-0.03105	0.9294	3.9595
14+15 22		-0.00046	0.9968	0.0039
14+17 23		0.01641	0.9925	1.1051
18+26 24		-0.03256	0.9790	4.3532
20+27 25		-0.00868	0.9847	0.3089
21+24 26		-0.00744	0.9905	0.2271
22+25 27		-0.00553	0.9818	0.1257
(E)	28	0.04535	0.8945	8.4558
(P)	29	0.01745	0.9593	1.2495
(F)	30	0.02306	0.9683	2.1825
(I)	31	0.06978	0.9853	23.3785
30+31 32		-0.05565	0.9959	12.7475

STEP NUMBER   5
VARIABLE ENTERED   3
MULTIPLE R   0.1760
STD. ERROR OF EST.   0.2772

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	10.084	2.017	26.246
RESIDUAL	4103	315.282	0.077	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.49277)		
Q10 1	-0.07969	0.01803	19.5373
Q55 3	-0.01182	0.02071	3.3256
5+6 18	0.06651	0.02421	7.5451
8+9 19	0.15239	0.02590	34.6153
49+58 20	0.16246	0.02862	32.2154

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q32	2	0.01319	0.9913	0.7152
Q56	4	-0.00904	0.4933	0.3350
Q12	5	0.04041	0.9695	6.7092
Q13	6	0.04138	0.9587	7.0346
Q14	7	0.01589	0.9942	1.0361
Q15	8	-0.01065	0.9984	0.4657
Q17	9	0.00784	0.9900	0.2525
Q23	11	-0.03584	0.9593	5.2770
Q26	12	-0.00584	0.9891	0.1399
Q27	13	0.00894	0.9891	0.3280
Q28	14	0.15859	0.9483	105.8366
Q29	15	-0.11023	0.6270	50.4589
2+7	16	-0.01206	0.9886	0.5962
3X4	17	0.00356	0.9496	0.0520
61+62 21		-0.03205	0.9208	4.2191
14+15 22		-0.00046	0.9968	0.0009
14+17 23		0.01691	0.9896	1.1733
18+26 24		-0.03363	0.9690	4.6433
20+27 25		-0.00952	0.9766	0.3720
21+24 26		-0.00793	0.9877	0.2577
22+25 27		-0.00608	0.9782	0.1518
(E)	28	0.04461	0.8289	8.1781
(P)	29	0.01684	0.9541	1.1640
(F)	30	0.02338	0.9672	2.2439
(I)	31	0.06948	0.9837	19.8995
30+31 32		-0.05570	0.9959	12.7670

Table 5-11. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   4

MULTIPLE R   0.1763
STD. ERROR OF EST.   0.2772

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	10.110	1.685	21.924
RESIDUAL	4102	315.257	0.077	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.49675)							
Q10 1	-0.06995	0.02467	9.3379	Q32 2	0.01299	0.9908	0.6926
Q55 3	-0.01278	0.02078	0.3785	Q12 5	0.04072	0.9886	6.8103
Q56 4	-0.01409	0.02434	0.3350	Q13 6	0.04163	0.9580	7.1205
5+6 18	0.06601	0.02423	7.4222	Q14 7	0.01620	0.9931	1.0771
8+9 19	0.15184	0.02592	34.3142	Q15 8	-0.01021	0.9958	0.4277
49+58 20	0.16160	0.02866	31.7871	Q17 9	0.00792	0.9908	0.2573
				Q23 11	-0.03581	0.9593	5.2665
				Q26 12	-0.00602	0.9887	0.1486
				Q27 13	0.00880	0.9888	0.3175
				Q28 14	0.15836	0.9464	105.4839
				Q29 15	-0.11040	0.6069	50.6049
				2+7 16	-0.01192	0.9884	0.5831
				3X4 17	0.00404	0.9470	0.0671
				61+62 21	-0.03238	0.9198	4.3038
				14+15 22	0.00006	0.9935	0.0000
				14+17 23	0.01718	0.9888	1.2139
				18+26 24	-0.03378	0.9688	4.6853
				20+27 25	-0.00973	0.9761	0.3883
				21+24 26	-0.00793	0.9877	0.2579
				22+25 27	-0.00603	0.9782	0.1494
				(E) 28	0.04540	0.8244	8.4695
				(P) 29	0.01647	0.9524	1.1120
				(F) 30	0.02290	0.9639	2.1511
				(I) 31	0.06948	0.9837	19.8921
				30+31 32	-0.05581	0.9958	12.8118

STEP NUMBER   7
VARIABLE ENTERED   17

MULTIPLE R   0.1763
STD. ERROR OF EST.   0.2773

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	10.115	1.445	18.797
RESIDUAL	4101	315.252	0.077	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.49551)							
Q10 1	-0.06978	0.02468	7.9932	Q32 2	0.01289	0.9900	0.6808
Q55 3	-0.01232	0.02086	0.3496	Q12 5	0.04152	0.8751	7.3797
Q56 4	-0.01442	0.02438	0.3530	Q13 6	0.04353	0.8107	7.7848
3X4 17	0.00627	0.02458	0.3671	Q14 7	0.01603	0.9908	1.0537
5+6 18	0.06585	0.02424	7.3795	Q15 8	-0.01011	0.9951	0.4191
8+9 19	0.15259	0.02609	34.2172	Q17 9	0.00826	0.9848	0.2796
49+58 20	0.16206	0.02872	31.9430	Q23 11	-0.03598	0.9581	5.3136
				Q26 12	-0.00635	0.9829	0.1652
				Q27 13	0.00850	0.9824	0.2963
				Q28 14	0.15832	0.9451	105.4035
				Q29 15	-0.11039	0.6069	50.5168
				2+7 16	-0.01233	0.9807	0.6232
				61+62 21	-0.03254	0.9186	4.3467
				14+15 22	0.00004	0.9935	0.0000
				14+17 23	0.01731	0.9879	1.2291
				18+26 24	-0.03443	0.9572	4.8658
				20+27 25	-0.01013	0.9683	0.4210
				21+24 26	-0.00831	0.9805	0.2829
				22+25 27	-0.00650	0.9671	0.1733
				(E) 28	0.04532	0.8240	8.4392
				(P) 29	0.01637	0.9517	1.0991
				(F) 30	0.02291	0.9639	2.1524
				(I) 31	0.06943	0.9736	19.8571
				30+31 32	-0.05595	0.9950	12.8739

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

Table 5-11. (Continued)

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	8+9	19	0.1133	0.0128	0.0128	53.0024	1
2	49+50	20	0.1539	0.0237	0.0109	45.9706	2
3	Q10	1	0.1707	0.0291	0.0054	23.0274	3
4	5+6	18	0.1759	0.0309	0.0018	7.5351	4
5	Q55	3	0.1763	0.0310	0.0001	0.3256	5
5	Q54	4	0.1763	0.0311	0.0001	0.3350	6
7	?X4	17	0.1763	0.0311	0.0000	0.0671	7

Table 5-12. Acquisition from First Source

```
SUB-PROBLM    6
DEPENDENT VARIABLE      Q17
MAXIMUM NUMBER OF STEPS      ..
F-LEVEL FOR INCLUSION   0.000000
F-LEVEL FOR DELETION    0.000000
TOLERANCE LEVEL         0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED   25

MULTIPLE R        0.3097
STD. ERROR OF EST.    0.2687

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES   MEAN SQUARE    F   10
     REGRESSION   1         31.452         31.452    435  2.
     RESIDUAL   4107        296.571        0.072
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.86502)								
20+27 25	-0.24135	0.01155	435.5632		Q10	1	0.01373	0.9997	0.7744
					Q32	2	-0.07508	0.9914	23.2751
					Q55	3	0.04498	0.9886	8.3234
					Q56	4	0.00545	1.0000	0.1219
					Q12	5	-0.16881	0.9617	120.4368
					Q13	6	-0.13777	0.9632	79.4415
					Q14	7	-0.03016	0.9686	3.7392
					Q15	8	0.01007	0.9905	0.4161
					Q16	10	0.00936	0.9997	0.3599
					Q23	11	-0.14875	0.0326	92.9028
					Q26	12	-0.03246	0.7321	4.3311
					Q27	13	-0.00477	0.6549	0.0935
					Q28	14	-0.01741	0.9998	1.2443
					Q29	15	0.01845	0.9982	1.3979
					2+7	16	0.01316	0.9999	0.7115
					3X4	17	-0.06221	0.9872	15.9507
					5+6	18	0.00091	0.9993	0.0034
					8+9	19	0.04272	0.9868	7.5068
					49+50	20	0.01167	0.9979	0.5589
					61+62	21	-0.09330	0.9781	36.0527
					14+15	22	-0.00703	0.9965	0.2028
					14+17	23	0.75075	0.9829	5303.4592
					18+26	24	-0.11275	0.2721	52.8725
					21+24	26	-0.03493	0.9245	5.0163
					22+25	27	-0.13708	0.8858	78.6342
					(E)	28	-0.03652	0.9618	5.4821
					(P)	29	-0.08883	0.9916	32.6601
					(F)	30	0.02304	1.0000	2.1813
					(I)	31	0.23423	0.9982	238.3393
					30+31	32	0.07368	0.9979	22.4144

```
STEP NUMBER    2
VARIABLE ENTERED   27

MULTIPLE R        0.3360
STD. ERROR OF EST.    0.2662

ANALYSIS OF VARIANCE
                 DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
     REGRESSION   2         37.025         18.513     261.215
     RESIDUAL   4106        290.998        0.071
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.94746)								
20+27 25	-0.20462	0.01216	283.2931		Q10	1	0.00917	0.9985	0.3454
22+25 27	-0.16565	0.01868	78.6342		Q32	2	-0.06749	0.9877	18.7827
					Q55	3	0.03751	0.9774	5.7833
					Q56	4	0.00386	0.9998	0.0613
					Q12	5	-0.14754	0.9293	91.3512
					Q13	6	-0.12085	0.9443	60.8440

Table 5-12.　(Continued)

.	Q14	7	-0.01510	0.9565	0.9358
.	C15	8	0.01351	0.9979	0.7493
.	Q16	10	0.00977	0.9997	0.3920
.	Q23	11	-0.13037	0.8128	70.9763
.	Q26	12	-0.02263	0.7281	2.1036
.	Q27	13	0.00364	0.6524	0.0544
.	Q28	14	-0.02193	0.9988	1.9758
.	Q29	15	0.01467	0.9974	0.8833
.	2+7	16	0.01420	0.9998	0.8277
.	3X4	17	-0.05058	0.9792	10.5282
.	5+6	18	0.00922	0.9957	0.3492
.	8+9	19	0.04506	0.9834	5.0534
.	49+58	20	0.02133	0.9932	1.8686
.	61+62	21	-0.08686	0.9753	31.2036
.	14+15	22	0.00329	0.9909	0.0444
.	14+17	23	0.75388	0.9819	5404.7192
.	18+26	24	-0.09391	0.2658	36.5215
.	21+24	26	0.09836	0.4237	40.1052
.	(E)	28	-0.03031	0.9596	3.7752
.	(P)	29	-0.08126	0.9877	27.2861
.	(F)	30	0.02361	1.0000	2.2887
.	(I)	31	0.24695	0.9932	266.5972
.	30+31	32	0.08385	0.9934	29.0681

```
STEP NUMBER    3
VARIABLE ENTERED   29

MULTIPLE R          0.3448
STD. ERROR OF EST.  0.2654

ANALYSIS OF VARIANCE
                DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
  REGRESSION     3        38.947          12.982      184.354
  RESIDUAL    4105       289.076           0.070
```

				.				
VARIABLES IN EQUATION				.	**VARIABLES NOT IN EQUATION**			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.96172)			.				
20+27 25	-0.20044	0.01214	272.3736	.	Q10	1	0.00658	0.9975	0.1778
23+25 27	-0.15961	0.01866	73.1893	.	Q32	2	-0.05905	0.9756	14.3582
(P) 29	-0.08154	0.01561	27.2551	.	Q55	3	0.02768	0.9622	3.1465
				.	Q56	4	0.00026	0.9978	0.0003
				.	Q12	5	-0.14060	0.9201	82.7666
				.	Q13	6	-0.11313	0.9333	53.2098
				.	Q14	7	-0.01246	0.9555	0.6374
				.	Q15	8	0.01103	0.9970	0.4993
				.	Q16	10	0.01147	0.9993	0.5404
				.	Q23	11	-0.12464	0.8075	64.7588
				.	Q26	12	-0.02196	0.7280	1.9793
				.	Q27	13	0.00439	0.6524	0.0791
				.	Q28	14	-0.02086	0.9986	1.7874
				.	Q29	15	0.01354	0.9972	0.7525
				.	2+7	16	0.01251	0.9994	0.6423
				.	3X4	17	-0.04799	0.9781	9.4716
				.	5+6	18	0.01431	0.9919	0.8402
				.	8+9	19	0.02467	0.9664	2.4991
				.	49+58	20	0.03196	0.9773	4.1975
				.	61+62	21	-0.07701	0.9581	24.4852
				.	14+15	22	0.00262	0.9908	0.0281
				.	14+17	23	0.75371	0.9803	5397.5839
				.	18+26	24	-0.09041	0.2652	33.8196
				.	21+24	26	0.09470	0.4226	37.1381
				.	(E)	28	-0.00908	0.8919	0.3383
				.	(F)	30	0.02562	0.9994	2.6947
				.	(I)	31	0.25720	0.9833	290.7173
				.	30+31	32	0.03591	0.9930	30.5184

Table 5-12. (Continued)

STEP NUMBER 4
VARIABLE ENTERED 17

MULTIPLE R 0.3475
STD. ERROR OF EST. 0.2651

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	39.613	9.903	140.919
RESIDUAL	4104	288.411	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.96566)							
3X4 17	-0.07118	0.02313	9.4716		Q10 1	0.00963	0.9935	0.3809
20+27 25	-0.19764	0.01217	263.8975		U32 2	-0.05791	0.9750	13.8050
22+25 27	-0.15457	0.01871	69.2520		Q55 3	0.02017	0.9367	1.6698
(P) 29	-0.07990	0.01560	25.2211		Q56 4	0.00510	0.9878	0.1069
					Q12 5	-0.13257	0.8455	73.4024
					Q13 6	-0.10270	0.7970	43.7375
					Q14 7	-0.01205	0.9554	0.5958
					Q15 8	0.01025	0.9967	0.4313
					Q16 10	0.01035	0.9987	0.4397
					Q23 11	-0.12428	0.8074	64.3710
					Q26 12	-0.02114	0.7278	1.8346
					Q27 13	0.00529	0.6521	0.1148
					Q28 14	-0.02148	0.9984	1.8948
					Q29 15	0.01633	0.9940	1.0944
					2+7 16	0.01635	0.9932	1.0965
					5+6 18	0.01430	0.9919	0.8397
					8+9 19	0.01643	0.9360	1.1081
					49+58 20	0.02880	0.9728	3.4057
					61+62 21	-0.07441	0.9548	22.8420
					14+15 22	0.00220	0.9908	0.0199
					14+17 23	0.75345	0.9793	5307.9526
					18+26 24	-0.08774	0.2642	31.8281
					21+24 26	0.09498	0.4226	37.3542
					(E) 28	-0.00701	0.6902	3.2019
					(F) 30	0.02373	0.9978	2.3111
					(I) 31	0.26632	0.9715	308.1055
					30+31 32	0.08738	0.9922	31.5651

STEP NUMBER 5
VARIABLE ENTERED 20

MULTIPLE R 0.3486
STD. ERROR OF EST. 0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	39.852	7.970	113.482
RESIDUAL	4103	288.172	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.95433)							
3X4 17	-0.06827	0.02318	8.6775		Q10 1	0.01275	0.9825	0.6666
49+58 20	0.05021	0.02721	3.4057		U32 2	-0.05766	0.9749	13.6843
20+27 25	-0.19801	0.01216	264.9751		Q55 3	0.02100	0.9360	1.8102
22+25 27	-0.15689	0.01875	70.0415		Q56 4	0.00813	0.9772	0.2710
(P) 29	-0.08364	0.01573	28.2739		Q12 5	-0.13739	0.8319	78.9222
					Q13 6	-0.10718	0.7845	47.6724
					Q14 7	-0.01352	0.9530	0.7494
					Q15 8	0.01000	0.9966	0.4102
					Q16 10	0.00758	0.9892	0.2354
					Q23 11	-0.12487	0.8071	64.9719
					Q26 12	-0.02273	0.7257	2.1206
					Q27 13	0.00370	0.6501	0.0563
					Q28 14	-0.02386	0.9921	2.3363
					Q29 15	0.02008	0.9786	1.6541
					2+7 16	0.01567	0.9927	1.0081
					5+6 18	0.01009	0.9695	0.4177
					8+9 19	0.01723	0.9353	1.2185
					61+62 21	-0.07689	0.9491	24.3958
					14+15 22	0.00128	0.9897	0.0067
					14+17 23	0.75332	0.9764	5362.2394
					18+26 24	-0.08831	0.2641	32.2426
					21+24 26	0.09507	0.4226	37.4121
					(E) 28	-0.01314	0.8535	0.7081
					(F) 30	0.02330	0.9976	2.2277
					(I) 31	0.26389	0.9711	307.0314
					30+31 32	0.08639	0.9908	30.8466

Table 5-12. (Continued)

STEP NUMBER 6
VARIABLE ENTERED 30

MULTIPLE R   0.3492
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	40.008	6.668	94.960
RESIDUAL	4102	288.015	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.94998)			.	Q10	1	0.01449	0.9773	0.8614
3X4 17	-0.06691	0.02319	9.3255	.	Q32	2	-0.05791	0.9748	13.7994
49+58 20	0.04958	0.02720	3.3220	.	Q55	3	0.01838	0.9229	1.3861
20+27 25	-0.19797	0.01216	264.3339	.	Q56	4	0.01059	0.9669	0.4597
22+25 27	-0.15699	0.01874	70.1692	.	Q12	5	-0.13027	0.8310	79.9354
(P) 29	-0.08418	0.01573	29.6339	.	Q13	6	-0.10737	0.7845	47.8282
(F) 30	0.04629	0.04102	2.2277	.	Q14	7	-0.01408	0.9525	0.8133
				.	Q15	8	0.01090	0.9952	0.4876
				.	Q16	10	0.00690	0.9871	0.1735
				.	Q23	11	-0.12457	0.8070	64.6377
				.	Q26	12	-0.02256	0.7256	2.0878
				.	Q27	13	0.00399	0.6500	0.0652
				.	Q28	14	-0.02466	0.9910	2.4963
				.	Q29	15	0.02252	0.9688	2.0808
				.	2+7	16	0.01473	0.9910	0.8901
				.	5+6	18	0.00835	0.9639	0.2860
				.	8+9	19	0.01377	0.9124	0.7772
				.	61+62 21		-0.07656	0.9489	24.1798
				.	14+15 22		0.00172	0.9894	0.0121
				.	14+17 23		0.75317	0.9753	5375.8639
				.	18+26 24		-0.08832	0.2641	32.2411
				.	21+24 26		0.09478	0.4225	37.1714
				.	(E) 28		-0.01357	0.8532	0.7549
				.	(I) 31		0.26391	0.9711	307.0030
				.	30+31 32		0.08620	0.9907	30.7001

STEP NUMBER 7
VARIABLE ENTERED 3

MULTIPLE R   0.3497
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	40.105	5.729	81.607
RESIDUAL	4101	287.918	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.93983)			.	Q10	1	0.01767	0.9521	1.2838
Q55 3	0.02004	0.01702	1.3851	.	Q32	2	-0.05748	0.9742	13.5902
3X4 17	-0.06247	0.02349	7.0731	.	Q56	4	0.01428	0.9330	0.8367
49+58 20	0.05056	0.02722	3.4528	.	Q12	5	-0.13800	0.8308	79.5959
20+27 25	-0.19662	0.01222	259.3614	.	Q13	6	-0.10639	0.7809	46.9434
22+25 27	-0.15621	0.01875	69.3844	.	Q14	7	-0.01523	0.9490	0.9507
(P) 29	-0.08195	0.01585	25.7451	.	Q15	8	0.01128	0.9948	0.5218
(F) 30	0.04194	0.03123	1.8034	.	Q16	10	0.00549	0.9840	0.1237
				.	Q23	11	-0.12351	0.8017	63.5085
				.	Q26	12	-0.02289	0.7254	2.1502
				.	Q27	13	0.00356	0.6497	0.0521
				.	Q28	14	-0.02720	0.9746	3.0496
				.	Q29	15	0.02581	0.9438	2.7335
				.	2+7	16	0.01360	0.9870	0.7588
				.	5+6	18	0.00796	0.9635	0.2598
				.	8+9	19	0.00491	0.6651	0.0990
				.	61+62 21		-0.07454	0.9218	22.9069
				.	14+15 22		0.00146	0.9892	0.0088
				.	14+17 23		0.75340	0.9725	5382.1708
				.	18+26 24		-0.08755	0.2635	31.6886
				.	21+24 26		0.09476	0.4225	37.1521
				.	(E) 28		-0.00853	0.7790	0.2980
				.	(I) 31		0.26561	0.9674	311.2022
				.	30+31 32		0.08634	0.9907	30.7929

Table 5-12.   (Continued)

STEP NUMBER   8
VARIABLE ENTERED   1

MULTIPLE R   0.3501
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	4C.195	5.024	71.571
RESIDUAL	4 0	287.828	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT	0.92438)			.					
Q10 1	0.01927	0.01703	1.2838	.	032	2	-0.05806	0.9732	13.8632
Q55 3	0.02317	0.01725	1.8054	.	056	4	0.08291	0.4899	0.0346
3X4 17	-0.0C319	0.02350	7.2350	.	012	5	-0.13739	0.8293	70.8604
49+58 20	0.05399	0.02738	3.8972	.	013	6	-0.10620	0.7808	46.7605
20+27 25	-0.19679	0.01222	253.4879	.	014	7	-0.01511	0.9489	0.9356
22+25 27	-0.15545	0.01877	69.6150	.	015	8	0.01171	0.9942	0.5617
(P) 29	-0.08125	0.01586	25.2592	.	016	10	0.00690	0.9773	0.1997
(F) 30	0.04387	0.03128	1.9670	.	023	11	-0.12350	0.8017	62.4012
				.	026	12	-0.02306	0.7254	2.1815
				.	027	13	0.00318	0.6494	0.0414
				.	028	14	-0.02620	0.9707	2.8160
				.	029	15	0.01911	0.6278	1.4981
				.	2+7	16	0.0136*	0.9870	0.7683
				.	5+6	18	0.01029	0.9479	0.4339
				.	8+9	19	0.00685	0.6574	0.1924
				.	61+62 21		-0.07457	0.9218	22.9208
				.	14+15 22		0.00186	0.9907	0.0141
				.	14+17 23		0.75339	0.9724	5380.5137
				.	18+26 24		-0.08728	0.2634	31.4640
				.	21+24 26		0.09471	0.4225	37.1030
				.	(E) 28		-0.00854	0.7790	0.2992
				.	(I) 31		0.26517	0.9659	310.0105
				.	30+31 32		0.08696	0.9897	31.2349

STEP NUMBER   9
VARIABLE ENTERED   18

MULTIPLE R   0.3502
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	40.226	4.470	63.658
RESIDUAL	4099	287.797	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT	0.91397)			.					
Q10 1	0.02071	0.01717	1.4567	.	032	2	-0.05814	0.9732	13.8977
Q55 3	0.02316	0.01725	1.8038	.	056	4	0.00323	0.4894	0.0426
3X4 17	-0.06350	0.02351	7.2955	.	012	5	-0.13758	0.8290	79.0600
5+6 18	0.01531	0.02325	0.4339	.	013	6	-0.10628	0.7808	46.9146
49+58 20	0.03150	0.02765	3.4698	.	014	7	-0.01520	0.9489	3.9468
20+27 25	-0.19680	0.01222	253.4921	.	015	8	0.01136	0.9930	0.5291
22+25 27	-0.15597	0.01878	68.9477	.	016	10	0.00658	0.9758	0.1776
(P) 29	-0.08165	0.01587	25.4752	.	023	11	-0.12461	0.7973	64.6397
(F) 30	0.04250	0.03175	1.8377	.	026	12	-0.02329	0.7250	2.2250
				.	027	13	0.00316	0.6494	0.0408
				.	028	14	-0.02655	0.9696	2.8909
				.	029	15	0.01903	0.623*	1.6123
				.	2+7	16	0.01284	0.9765	0.6759
				.	8+9	19	0.00702	0.6573	0.2017
				.	61+62 21		-0.07549	0.9172	23.4866
				.	14+15 22		0.00153	0.9877	0.0096
				.	14+17 23		0.75336	0.9722	5378.1978
				.	18+26 24		-0.08778	0.2630	31.82C4
				.	21+24 26		0.09443	0.4221	36.8728
				.	(E) 28		-0.00970	0.7701	0.3859
				.	(I) 31		0.26562	0.9650	311.0830
				.	30+31 32		0.08671	0.9888	31.0414

Table 5-12.   (Continued)

STEP NUMBER   10
VARIABLE ENTERED   28

MULTIPLE R   0.3503
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	40.253	4.025	57.322
RESIDUAL	4098	287.770	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.91475)							
Q10 1	0.02087	0.01717	1.4752		Q32 2	-0.05767	0.9699	13.6714
Q55 3	0.01988	0.01854	1.2145		Q56 4	-0.00414	0.4853	0.0701
3X4 17	-0.06337	0.02351	7.2640		Q12 5	-0.13738	0.8285	78.8000
5+6 18	0.01687	0.02338	3.5236		Q13 6	-0.10603	0.7800	46.5547
49+58 23	0.05477	0.02814	3.7856		Q14 7	-0.01454	0.9445	0.8661
20+27 25	-0.19579	0.01233	252.2352		Q15 8	0.01232	0.9845	3.6216
22+25 27	-0.15597	0.01879	68.9342		Q16 10	0.00706	0.9741	0.2006
(E) 28	-0.00943	0.01519	3.3859		Q23 11	-0.12461	0.7784	64.6197
(P) 29	-0.07940	0.01625	23.9223		Q26 12	-0.02316	0.7247	2.1876
(F) 30	0.04344	0.03139	1.9153		Q27 13	0.00326	0.6493	0.3435
					Q28 14	-0.02652	0.9696	2.8830
					Q29 15	0.01966	0.6249	1.5842
					2+7 16	0.01235	0.9768	0.6249
					8+9 19	0.00696	0.6572	0.1982
					61+62 21	-0.07495	0.8888	23.1473
					14+15 22	0.00262	0.9758	0.0280
					14+17 23	0.75438	0.9707	5415.8698
					18+26 24	-0.08731	0.2617	31.4749
					21+24 26	0.09405	0.4209	36.3605
					(I) 31	0.26667	0.9616	313.6450
					30+31 32	0.08639	0.9872	30.8074

STEP NUMBER   11
VARIABLE ENTERED   10

MULTIPLE R   0.3504
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	11	40.267	3.661	52.119
RESIDUAL	4097	287.756	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.91111)							
Q10 1	0.02147	0.01723	1.5527		Q32 2	-0.05770	0.9698	13.6344
Q55 3	0.01946	0.01807	1.1631		Q56 4	0.00423	0.4852	0.0734
Q16 10	0.03667	0.01489	5.2036		Q12 5	-0.13785	0.8267	79.3394
3X4 17	-0.06331	0.02351	7.2330		Q13 6	-0.10646	0.7784	46.9547
5+6 18	0.01651	0.02340	3.4978		Q14 7	-0.01465	0.9437	0.8798
49+58 20	0.05383	0.02823	3.6359		Q15 8	0.01242	0.9843	0.6317
20+27 25	-0.19569	0.01233	251.8781		Q23 11	-0.12442	0.7765	64.4027
22+25 27	-0.15591	0.01879	68.8734		Q26 12	-0.02313	0.7247	2.1921
(E) 28	-0.00972	0.01520	3.4088		Q27 13	0.00310	0.6490	0.0394
(P) 29	-0.07940	0.01625	23.9184		Q28 14	-0.02812	0.9415	3.2617
(F) 30	0.04301	0.03141	1.8756		Q29 15	0.02056	0.6173	1.7322
					2+7 16	0.01243	0.9707	0.6325
					8+9 19	0.00634	0.6520	0.1655
					61+62 21	-0.07469	0.8863	22.9782
					14+15 22	0.00264	0.9758	0.0285
					14+17 23	0.75439	0.9704	5409.6664
					18+26 24	-0.08707	0.2609	31.2873
					21+24 26	0.09405	0.4208	36.5502
					(I) 31	0.26676	0.9580	313.7932
					30+31 32	0.08692	0.9842	31.1805

Table 5-12.   (Continued)

STEP NUMBER   12
VARIABLE ENTERED   19

MULTIPLE R   0.3904
STD. ERROR OF EST.   0.2650

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	40.279	3.357	47.780
RESIDUAL	4096	287.745	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.90767)			.				
Q10 1	-.02210	0.01732	1.6435	.	Q32 2	-0.05744	0.9649	13.3573
Q55 3	-.01536	0.02069	3.5515	.	Q56 4	0.00441	0.4040	0.0795
Q16 10	0.00612	0.01495	3.1679	.	Q12 5	-0.13020	0.0220	79.0309
3X4 17	-0.06231	0.02364	5.9465	.	Q13 6	-0.10662	0.7781	47.6892
5+6 18	0.01668	0.02341	3.2051	.	Q14 7	-0.07480	0.9432	0.0069
8+9 19	0.01028	0.02527	3.1055	.	Q15 8	0.01240	0.9042	0.6378
49+58 20	0.05413	0.02824	3.6013	.	Q23 11	-0.12431	0.7717	64.2693
20+27 25	-0.19563	0.01253	251.4891	.	Q26 12	-0.02355	0.7221	2.2723
22+25 27	-0.15574	0.01879	68.6710	.	Q27 13	0.00281	0.6476	0.0324
(E) 28	-0.00966	0.01521	3.4055	.	Q28 14	-0.02940	0.9286	3.5418
(P) 29	-0.07897	0.01610	23.4616	.	Q29 15	0.62069	0.6171	1.7534
(F) 30	0.04167	0.03158	1.7637	.	2+7 16	0.01245	0.9767	0.6352
				.	61+62 21	-0.07651	0.8703	22.0503
				.	14+15 22	0.00262	0.9758	0.0281
				.	14+17 23	0.75442	0.9700	5409.4345
				.	18+26 24	-0.04701	0.2609	31.2406
				.	21+24 26	0.09391	0.4205	36.4336
				.	(I) 31	0.26747	0.9553	315.5230
				.	30+31 32	0.08696	0.9841	31.1996

STEP NUMBER   13
VARIABLE ENTERED   4

MULTIPLE R   0.3504
STD. ERROR OF EST.   0.2651

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	13	40.284	3.099	44.101
RESIDUAL	4095	287.739	0.070	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.90580)			.				
Q10 1	-0.01755	0.02367	3.5550	.	Q32 2	-0.05736	0.9665	13.5156
Q55 3	-0.01767	0.02072	3.5723	.	Q12 5	-0.13042	0.0246	79.9718
Q56 4	0.00662	0.02364	3.0735	.	Q13 6	-0.10668	0.7780	47.1232
Q16 10	0.00617	0.01495	3.1735	.	Q14 7	-0.01495	0.9423	0.9147
3X4 17	-0.06267	0.02368	7.0031	.	Q15 8	0.01232	0.9527	0.6213
5+6 18	0.01675	0.02343	3.5236	.	Q23 11	-0.12431	0.7717	64.2569
8+9 19	0.01047	0.02528	3.1715	.	Q26 12	-0.02349	0.7219	2.2598
49+58 20	0.05565	0.02829	3.7339	.	Q27 13	0.00284	0.6476	0.0331
20+27 25	-0.19546	0.01234	253.7128	.	Q28 14	-0.07923	0.9188	3.5013
22+25 27	-0.15503	0.01880	63.6994	.	Q29 15	0.02023	0.5970	1.6756
(E) 28	-0.01006	0.01527	3.4336	.	2+7 16	0.01239	0.9764	0.6202
(P) 29	-0.07869	0.01633	23.2097	.	61+62 21	-0.07438	0.8690	22.7767
(F) 30	0.04221	0.03164	1.7730	.	14+15 22	0.00241	0.9737	0.0239
				.	14+17 23	0.75454	0.9695	5412.1890
				.	18+26 24	-0.08699	0.2609	31.2186
				.	21+24 26	0.09392	0.4209	36.4364
				.	(I) 31	0.26750	0.9553	315.5366
				.	30+31 32	0.08701	0.9860	31.2299

Table 5-12. (Continued)

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STEP NUMBER    14
VARIABLE ENTERED    22

MULTIPLE R            0.3594
STD. ERROR OF EST.   0.2621

ANALYSIS OF VARIANCE
                     DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   14        40.204          2.870        40.943
        RESIDUAL     4034     287.737          0.073
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.90715							
Q13 1	0.01730	0.02370	0.5644		Q32 2	-0.05732	0.9658	13.4918
Q55 3	0.01555	0.02073	0.5623		Q12 5	-0.13920	0.8179	88.8776
Q56 4	0.03645	0.02351	0.3753		Q13 6	-0.10691	0.7763	47.3218
3X4 13	0.00518	0.01495	0.1738		C14 7	-0.02072	0.5915	1.7486
3X4 17	-0.06264	0.02369	5.9963		Q15 8	0.02072	0.7389	1.7586
5+6 18	0.01607	0.02344	0.5134		Q23 11	-0.12672	0.7685	64.6777
8+9 19	0.01245	0.02528	0.1739		Q26 12	-0.02353	0.7210	2.2665
49+58 20	0.05461	0.02030	3.7253		Q27 13	0.00278	0.6672	8.0317
14+15 22	0.03280	0.01813	0.3239		C28 14	-0.02934	0.9172	3.5316
20+27 25	-0.19550	0.01235	253.6534		Q29 15	0.02026	0.5969	1.6831
22+25 27	-0.15431	0.01805	69.5139		2+7 16	0.01229	0.9743	0.6170
(E) 28	-0.01975	0.01534	2.4533		61+62 21	-0.07640	0.8689	22.78+2
(P) 29	-0.07461	0.01635	23.1337		14+17 23	0.02313	0.8126	2600.0923
(F) 30	0.04234	0.03166	1.7882		18+26 24	-0.08697	0.2609	31.1979
					21+24 26	0.09391	0.4205	36.4197
					(I) 31	0.26749	0.9551	315.4387
					30+31 32	0.08745	0.9783	31.5410

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	20+27 25		0.3097	0.0959	0.0959	435.5632	1
2	22+25 27		0.3363	0.1129	0.0170	78.63+2	2
3	(P) 29		0.3445	0.1187	0.0059	27.2861	3
4	3X4 17		0.3475	0.1208	0.0020	9.4716	4
5	49+58 20		0.3485	0.1215	0.0007	3.4057	5
6	(F) 30		0.3492	0.1220	0.0005	2.2277	6
7	Q55 3		0.3497	0.1223	0.0003	1.3861	7
8	Q10 1		0.3501	0.1225	0.0003	1.2808	8
9	5+6 18		0.3502	0.1226	0.0001	0.4339	9
10	(E) 28		0.3503	0.1227	0.0001	0.3859	10
11	Q15 16		0.3504	0.1228	0.0000	0.2006	11
12	8+9 19		0.3504	0.1228	0.0000	0.1655	12
13	Q56 4		0.3504	0.1228	0.0000	0.0795	13
14	14+15 22		0.3504	0.1228	0.0000	0.0239	14

Table 5-13. Actual Layout of Transporting Medium plus Actual Composition of Transporting Medium

```
SUB-PROBLEM    3
DEPENDENT VARIABLE       +(QM-Q19)
MAXIMUM NUMBER OF STEPS     30
F-LEVEL FOR INCLUSION    0.010000
F-LEVEL FOR DELETION     0.005000
TOLERANCE LEVEL          0.001000


STEP NUMBER    1
VARIABLE ENTERED    11

MULTIPLE R            5.0408
STD. ERROR OF EST.   3.1999

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE     F RATIO
        REGRESSION    1        431.196        431.190     10.493.605
        RESIDUAL    4288        167.337          6.045
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.07347)							
20+27 11	0.88520	0.00852	10793.6949		Q10 1	-0.02221	0.9997	2.0671
					Q55 2	-0.06783	0.9806	19.3536
					Q56 3	-0.00610	1.0000	0.0734
					Q16 4	-0.04663	0.9998	9.1238
					3X4 5	0.07861	0.9872	26.0362
					5+6 6	0.05828	0.9996	14.2719
					8+9 7	-0.06384	0.9865	17.1353
					49+58 8	0.03350	0.9978	4.7330
					14+17 9	-0.04151	0.9823	7.2271
					21+24 12	0.13714	0.9244	80.2610
					24+25 13	0.14861	0.8877	94.5537
					E 14	0.09977	0.9608	42.1000
					(F) 15	-0.00349	1.0000	5.0454

```
STEP NUMBER    2
VARIABLE ENTERED    12

MULTIPLE R           0.8519
STD. ERROR OF EST.   0.1980

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE     F RATIO
        REGRESSION    2        434.344        217.172      5539.112
        RESIDUAL    4287        164.163          0.039
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.01092)							
20+27 11	0.86361	0.00878	9679.2322		Q10 1	-0.01952	0.9992	1.5949
21+24 12	0.12742	0.01422	83.2610		Q55 2	-0.06336	0.9792	16.8747
					Q56 3	-0.06277	0.9999	0.0321
					Q16 4	-0.04756	0.9997	9.6897
					3X4 5	0.07067	0.9832	21.0084
					5+6 6	0.04990	0.9951	10.4531
					8+9 7	-0.06102	0.9859	15.6631
					49+58 8	0.02768	0.9958	3.2088
					14+17 9	-0.04282	0.9823	7.6890
					22+25 13	0.07142	0.4117	21.4627
					E 14	0.10136	0.9608	43.4487
					(F) 15	-0.00459	0.9999	3.3883

Table 5-13. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   14

MULTIPLE R   0.8535
STD. ERROR OF EST.   0.1970

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	436.033	145.344	3744.662
RESIDUAL	4186	162.474	0.039	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.00248)				Q10	1	-0.02126	0.9990	1.8916
20+27 11	0.85235	0.30890	9172.4774		Q55	2	-0.03303	0.8801	4.5628
21+24 12	0.12784	0.01415	81.6127		Q56	3	-0.01071	0.9939	0.4802
E 14	0.06600	0.01001	43.4497		Q16	4	-0.05284	0.9974	11.7191
					3X4	5	0.06534	0.9800	17.9430
					5+6	6	0.03625	0.9756	5.5068
					8+9	7	-0.04243	0.9490	7.5461
					49+58	8	0.00479	0.9444	0.0962
					14+17	9	-0.04502	0.9819	8.5005
					22+25 13		0.06404	0.4092	17.2357
					(F)	15	-0.00703	0.9993	0.2068

STEP NUMBER   4
VARIABLE ENTERED   5

MULTIPLE R   0.8542
STD. ERROR OF EST.   0.1966

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	436.724	139.181	2824.350
RESIDUAL	4185	161.780	0.039	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.00697)				Q10	1	-0.02474	0.9963	2.5621
3X4 5	0.07193	0.01698	17.9430		Q55	2	-0.02298	0.8580	2.2096
20+27 11	0.84936	0.00891	9387.6134		Q56	3	-0.01679	0.9856	1.1734
21+24 12	0.12399	0.01415	76.7650		Q16	4	-0.05141	0.9968	11.0878
E 14	0.06358	0.01001	43.3615		5+6	6	0.03665	0.9756	5.6281
					8+9	7	-0.03129	0.9185	4.1005
					49+58	8	0.00948	0.9397	0.3760
					14+17	9	-0.04292	0.9806	7.7216
					22+25 13		0.06047	0.4078	15.3537
					(F)	15	-0.00439	0.9977	0.0808

STEP NUMBER   5
VARIABLE ENTERED   4

MULTIPLE R   0.8546
STD. ERROR OF EST.   0.1964

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	437.152	87.430	2267.144
RESIDUAL	4184	161.352	0.039	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.01433)				Q10	1	-0.03018	0.9859	3.8131
Q16 4	-0.03608	0.01084	11.0878		Q55	2	-0.01928	0.8534	1.5553
3X4 5	0.07058	0.01696	17.3392		Q56	3	-0.02155	0.9775	1.9437
20+27 11	0.84867	0.00890	9383.9031		5+6	6	0.03989	0.9720	6.6650
21+24 12	0.12424	0.01414	77.2549		8+9	7	-0.02535	0.9053	2.6896
E 14	0.06525	0.01001	42.5055		49+58	8	0.01420	0.9320	0.8436
					14+17	9	-0.04170	0.9801	7.2867
					22+25 13		0.06067	0.4078	15.4515
					(F)	15	-0.00219	0.9959	0.0200

Table 5-13.   (Continued)

STEP NUMBER   6
VARIABLE ENTERED   9

MULTIPLE R   3.8549
STD. ERROR OF EST.   3.1962

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	437.433	72.905	1893.340
RESIDUAL	4183	161.072	0.039	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.03842)							
Q16 4	-0.03535	0.01083	13.6518		Q10 1	-0.03045	0.9859	3.8814
3X4 5	0.06905	0.01696	16.5762		Q55 2	-0.01632	0.8489	1.1141
14+17 9	-0.04735	0.01743	7.2857		Q56 3	-0.02126	0.9774	1.8910
20+27 11	0.84558	3.00897	8893.4495		5+6 6	0.04058	0.9718	6.8988
21+24 12	0.12457	0.01613	77.7737		8+9 7	-0.02308	0.9025	2.2284
E 14	0.06579	0.01000	43.2631		49+58 8	0.01605	0.9302	1.0779
					22+25 13	0.05850	0.4066	14.3632
					(F) 15	-0.00007	0.9949	0.0032

STEP NUMBER   7
VARIABLE ENTERED   6

MULTIPLE R   0.8552
STD. ERROR OF EST.   3.1961

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	437.698	52.528	1626.137
RESIDUAL	4182	160.806	0.038	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.01399)							
Q16 4	-0.03706	3.01384	11.6916		Q10 1	-0.02474	0.9643	2.5616
3X4 5	0.06918	0.01695	16.6639		Q55 2	-0.01871	0.8461	1.4644
5+6 6	0.04426	0.01685	5.8988		Q56 3	-0.01567	0.9577	1.0263
14+17 9	-0.04777	3.01742	7.5234		8+9 7	-0.02415	0.9019	2.4390
20+27 11	0.84598	0.00896	8903.7936		49+58 8	0.01102	0.9153	3.5078
21+24 12	0.12210	0.01415	74.5012		22+25 13	0.05812	0.4065	14.1723
E 14	0.06217	0.01009	37.7436		(F) 15	-0.00375	0.9899	0.0588

STEP NUMBER   8
VARIABLE ENTERED   1

MULTIPLE R   0.8553
STD. ERROR OF EST.   0.1961

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	437.736	54.725	1423.721
RESIDUAL	4181	160.708	0.038	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.02765)							
Q10 1	-0.01988	0.01242	2.5516		Q55 2	-0.02259	0.8279	2.1338
Q16 4	-0.03870	0.01089	12.6235		Q56 3	0.00211	0.4959	0.3186
3X4 5	0.07053	0.01697	17.2839		8+9 7	-0.02835	0.8801	3.3617
5+6 6	0.04023	0.01703	5.5773		49+58 8	0.00881	0.9078	0.3246
14+17 9	-0.04737	3.01742	7.5567		22+25 13	0.05744	0.4062	13.8355
20+27 11	0.84512	0.00896	8914.2714		(F) 15	-0.00526	0.9863	0.1155
21+24 12	0.12173	3.01415	74.1244					
E 14	0.06279	0.01010	35.6751					

Table 5-13.   (Continued)

STEP NUMBER   9
VARIABLE ENTERED   7

MULTIPLE R   0.8554
STD. ERROR OF EST.   0.1960

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	437.926	53.658	1266.618
RESIDUAL	4180	160.579	0.038	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.04284)			:				
010 1	-0.02347	0.01257	3.4843	:	Q55 2	-0.00905	0.6249	0.4353
Q16 4	-0.03662	0.01094	11.1992	:	Q56 3	0.00026	0.4938	0.0003
3X4 5	0.06515	0.01721	14.3252	:	49+50 8	0.00782	0.9067	0.2555
5+6 6	0.04030	0.01733	5.6013	:	22+25 13	0.05649	0.4057	13.3778
8+9 7	-0.02928	0.01597	3.3617	:	(F) 15	-0.00113	0.9653	0.0054
14+17 9	-0.04609	0.01744	5.9859	:				
20+27 11	0.84342	0.00897	8887.9892	:				
21+24 12	0.12126	0.01414	73.6937	:				
F 14	0.05916	0.01029	33.0782	:				

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	20+27	11	0.8489	0.7205	0.7205	10793.6849	1
2	21+24	12	0.8519	0.7257	0.0053	80.2610	2
3	E	14	0.8535	0.7285	0.0028	43.4487	3
4	3X4	5	0.8542	0.7297	0.0012	17.9430	4
5	Q16	4	0.8545	0.7304	0.0007	11.0878	5
6	14+17	9	0.8549	0.7309	0.0005	7.2867	6
7	5+6	6	0.8552	0.7313	0.0004	6.8988	7
8	Q10	1	0.8553	0.7315	0.0002	2.5616	8
9	8+9	7	0.8554	0.7317	0.0002	3.3617	9

Table 5-14. Desired Composition of Transporting Medium plus Desired Layout of Transporting Medium

```
SUB-PROBLM   2
DEPENDENT VARIABLE        ((220-027)
MAXIMUM NUMBER OF STEPS    30
F-LEVEL FOR INCLUS         0.010000
F-LEVEL FOR DELETION       0.005000
TOLERANCE LEVEL            0.001000


STEP NUMBER    1
VARIABLE ENTERED   13

MULTIPLE R            0.3351
STD. ERROR OF EST.   0.3415

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
    REGRESSION     1        61.779         61.779      529.633
    RESIDUAL     4189       488.508         0.117
```

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.32761)			:				
22+25 13	0.51520	0.02239	529.5329	:	Q10 1	0.02827	0.9994	3.3487
				:	Q55 2	-0.11235	0.9896	53.5279
				:	Q56 3	0.00950	0.9999	3.3779
				:	Q16 4	-0.01671	1.0000	1.1701
				:	3X4 5	0.07735	0.9853	25.2026
				:	5+6 6	0.00318	0.9956	3.3425
				:	8+9 7	-0.09090	0.9915	34.9454
				:	49+50 8	0.02073	0.9934	1.8054
				:	14+17 9	-0.11478	0.9943	55.8984
				:	18+26 10	0.82845	0.0715	9151.8367
				:	21+24 12	0.03487	0.4293	5.0959
				:	E 14	0.17134	0.9874	126.6335
				:	(F) 15	-0.00428	1.0000	0.0767

```
STEP NUMBER    2
VARIABLE ENTERED   14

MULTIPLE R            0.3719
STD. ERROR OF EST.   0.3365

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
    REGRESSION     2        76.119         38.060      336.076
    RESIDUAL     4187       474.167         0.113
```

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.28653)			:				
22+25 13	0.48714	0.02220	481.5659	:	Q10 1	0.02480	0.9989	2.5771
E 14	0.18984	0.01687	125.5335	:	Q55 2	-0.06029	0.8830	15.2695
				:	Q56 3	-0.00404	0.9938	0.0684
				:	Q16 4	-0.02482	0.9980	2.5797
				:	3X4 5	0.06741	0.9811	19.1366
				:	5+6 6	-0.02049	0.9773	1.7581
				:	8+9 7	-0.05826	0.9507	14.2551
				:	49+50 8	-0.01844	0.9434	1.4242
				:	14+17 9	-0.11666	0.9943	57.7556
				:	18+26 10	0.82279	0.8389	8772.8622
				:	21+24 12	0.04473	0.4281	8.3927
				:	(F) 15	-0.00826	0.9995	0.2853

Table 5-14. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   5

MULTIPLE R   0.3771
STD. ERROR OF EST.   0.3358

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	78.274	26.091	231.388
RESIDUAL	4186	472.813	0.113	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.27834)			:				
3X4 5	0.12669	0.02898	19.1056	:	Q10 1	0.02116	0.9958	1.8751
22+25 13	0.47636	0.02230	455.3135	:	Q55 2	-0.05020	0.6601	10.5734
E 14	0.18507	0.01687	123.3536	:	Q56 3	-0.01029	0.9854	0.4429
				:	Q16 4	-0.02316	0.9973	2.2451
				:	5+6 6	-0.02060	0.9773	1.6874
				:	8+9 7	-0.04690	0.9197	9.2554
				:	49+50 8	-0.01349	0.9382	3.7617
				:	14+17 9	-0.11442	0.9929	55.5214
				:	18+26 10	0.02192	0.0320	8713.9134
				:	21+24 12	0.0445	0.4281	8.3277
				:	(F) 15	-0.00553	0.9978	0.1281

STEP NUMBER   4
VARIABLE ENTERED   2

MULTIPLE R   0.3800
STD. ERROR OF EST.   0.3354

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	79.463	19.866	176.581
RESIDUAL	4185	470.823	0.113	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.31641)			:				
Q55 2	-0.07202	0.02215	13.5734	:	Q10 1	0.01327	0.9700	0.7375
3X4 5	0.11133	0.02933	14.4853	:	Q56 3	-0.01908	0.9572	1.5238
22+25 13	0.47240	0.02230	443.8213	:	Q16 4	-0.01950	0.9918	1.5928
E 14	0.16639	0.01780	87.3692	:	5+6 6	-0.01694	0.9733	1.2011
				:	8+9 7	-0.02473	0.6772	2.5638
				:	49+50 8	-0.01393	0.9377	0.5955
				:	14+17 9	-0.11049	0.9869	52.1864
				:	18+26 10	0.02144	0.0296	8605.6188
				:	21+24 12	0.04397	0.4280	8.1059
				:	(F) 15	0.00087	0.9817	0.0032

STEP NUMBER   5
VARIABLE ENTERED   7

MULTIPLE R   0.3807
STD. ERROR OF EST.   0.3354

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	79.751	15.950	141.830
RESIDUAL	4184	470.535	0.112	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.33081)			:				
Q55 2	-0.05081	0.02581	3.8754	:	Q10 1	0.01079	0.9598	0.4872
3X4 5	0.10596	0.02952	12.8837	:	Q56 3	-0.02146	0.9491	1.9265
8+9 7	-0.04985	0.03115	2.5638	:	Q16 4	-0.01719	0.9826	1.2369
22+25 13	0.47134	0.02230	445.6876	:	5+6 6	-0.01687	0.9733	1.1910
E 14	0.16566	0.01780	85.9725	:	49+50 8	-0.01245	0.9368	0.6487
				:	14+17 9	-0.11042	0.9862	51.6314
				:	18+26 10	0.02132	0.0207	8670.7418
				:	21+24 12	0.04452	0.4278	8.3080
				:	(F) 15	0.00364	0.9695	0.0556

Table 5-14.　(Continued)

STEP NUMBER　6
VARIABLE ENTERED　3

MULTIPLE R　　　　　　3.3012
STD. ERROR OF EST.　0.3353

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	79.963	13.328	118.539
RESIDUAL	4183	470.319	0.112	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.35338)				010　　1	0.03551	0.5004	5.2800
055　　2	-0.05441	0.02593	4.4014		016　　4	-0.01876	0.9777	1.4722
056　　3	-0.02925	0.02100	1.9255		5+6　　6	-0.02002	0.9540	1.6776
3X4　　5	0.10616	0.02956	13.3930		49+50　8	-0.01530	0.9217	0.9790
8+9　　7	-0.05395	0.03128	2.9532		14+17　9	-0.11001	0.9057	51.2310
22+25　13	0.47019	0.02232	443.9740		18+26　10	0.82124	0.0200	8663.1750
E　　14	0.16597	0.01780	85.3334		21+24　12	0.04454	0.4270	8.3123
					(F)　　15	0.00195	0.9634	0.0150

STEP NUMBER　7
VARIABLE ENTERED　1

MULTIPLE R　　　　　　3.3026
STD. ERROR OF EST.　0.3351

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	80.561	11.509	102.463
RESIDUAL	4182	469.726	0.112	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.33498)				016　　4	-0.01712	0.9755	1.2254
010　　1	0.06774	0.02948	5.2830		5+6　　6	-0.01760	0.9502	1.2960
055　　2	-0.05293	0.02593	4.1670		49+50　8	-0.01401	0.9204	3.8234
056　　3	-0.07553	0.02917	5.7236		14+17　9	-0.10951	0.9055	50.7519
3X4　　5	0.11034	0.02956	13.8628		18+26　10	0.82124	0.0277	8651.3986
8+9　　7	-0.04994	0.03131	2.5439		21+24　12	0.04424	0.4270	8.2092
22+25　13	0.47152	0.02231	445.5416		(F)　　15	0.00141	0.9632	0.0303
E　　14	0.16857	0.01783	87.3732					

STEP NUMBER　8
VARIABLE ENTERED　6

MULTIPLE R　　　　　　3.3030
STD. ERROR OF EST.　0.3351

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	80.707	10.088	89.823
RESIDUAL	4181	469.580	0.112	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.35897)				016　　4	-0.01636	0.9736	1.1189
010　　1	0.06533	0.02955	4.8972		49+50　8	-0.01211	0.9088	3.6128
055　　2	-0.05191	0.02595	3.7874		14+17　9	-0.10922	0.9051	53.4632
056　　3	-0.07737	0.02921	7.0147		18+26　10	0.82149	0.0277	8675.1638
3X4　　5	0.11036	0.02956	13.9425		21+24　12	0.04498	0.4271	5.4734
5+6　　5	-0.03315	0.02912	1.2954		(F)　　15	0.00243	0.9600	0.9246
8+9　　7	-0.05042	0.03131	2.5932					
22+25　13	0.47276	0.02234	447.8574					
E　　14	0.17160	0.01803	90.6398					

Table 5-14. (Continued)

```
STEP NUMBER    9
VARIABLE ENTERED    4

MULTIPLE R          0.3833
STD. ERROR OF EST.  0.3351

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   9         80.832          8.981      79.970
        RESIDUAL   4183        469.455         0.112
```

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.36932)							
Q10 1	0.06482	0.02958	4.8045		49+58 8	-0.01808	8.9855	0.4958
Q55 2	-0.05169	0.02595	3.7033		14+17 9	-0.10893	8.9847	53.1838
Q56 3	-0.07787	0.02922	7.1342		18+26 10	0.02144	0.8261	8894.4238
Q16 4	-0.01979	0.01871	1.1199		21+24 12	0.04496	0.4271	8.4454
3X4 5	0.11036	0.02956	13.9420		(F) 15	0.00270	0.9597	0.0334
5+6 6	-0.03179	0.02915	1.1895					
8+9 7	-0.04753	0.03143	2.2831					
22+25 13	0.47272	0.02234	447.8328					
E 14	0.17278	0.01806	91.5129					

```
STEP NUMBER   10
VARIABLE ENTERED    8

MULTIPLE R          0.3834
STD. ERROR OF EST.  0.3351

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   10        80.898          8.089      72.014
        RESIDUAL   4179        469.399         0.112
```

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.37439)							
Q10 1	0.06348	0.02959	4.6018		14+17 9	-0.10854	0.9825	49.8119
Q55 2	-0.05133	0.02595	3.9112		18+26 10	0.02165	0.8261	8681.9886
Q56 3	-0.07911	0.02927	7.3045		21+24 12	0.04497	0.4271	8.4657
Q16 4	-0.01878	0.01877	1.3910		(F) 15	0.00267	0.9597	0.0287
3X4 5	0.10896	0.02962	13.5334					
5+6 6	-0.02954	0.02933	1.3165					
8+9 7	-0.04838	0.03146	2.3652					
49+58 8	-0.02497	0.03553	0.4950					
22+25 13	0.47361	0.02238	443.0396					
E 14	0.17546	0.01846	90.3454					

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDEN VARIABLES INCLUDED
1	22+25 13		0.3351	0.1123	0.1123	529.6329	1
2	E 14		0.3719	0.1383	0.0261	126.6305	2
3	3X4 5		0.3771	0.1422	0.0039	17.1066	3
4	Q55 2		0.3800	0.1444	0.0022	10.5734	4
5	8+9 7		0.3807	0.1449	0.0005	2.5608	5
6	Q56 3		0.3812	0.1453	0.0004	1.9265	6
7	Q10 1		0.3825	0.1464	0.0011	5.2800	7
8	5+6 6		0.3833	0.1467	0.0003	1.2960	8
9	Q16 4		0.3833	0.1469	0.0002	1.1189	9
10	49+58 8		0.3834	0.1470	0.0001	0.4950	10

Table 5-15. Actual Volume of Transporting Medium plus Actual Detail of Transporting Medium

```
SUB-PROBLEM    1
DEPENDENT VARIABLE            (    )
MAXIMUM NUMBER OF STEPS       30
F-LEVEL FOR INCLUSION         0.010000
F-LEVEL FOR DELETION          0.005000
TOLERANCE LEVEL               0.001000


STEP NUMBER    1
VARIABLE ENTERED    13

MULTIPLE R                    0.7554
STD. ERROR OF EST.            0.1466

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    1        119.634         119.634      5567.174
     RESIDUAL    4188         89.996           0.021
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.-.4130)								
22+25 13	0.7174	0.00961	5567.1239		210	1	0.00563	0.9994	0.1325
					055	2	0.03405	0.9096	0.0906
					056	3	-0.00327	0.9999	0.0449
					016	4	-0.00165	1.0000	0.0114
					3X4	5	0.00054	0.9053	0.0012
					5+6	6	0.02974	0.9556	3.7057
					8+9	7	0.02126	0.9915	1.8934
					49+50	8	-0.00077	0.9934	0.3221
					16+17	9	0.04065	0.9943	6.9294
					18+26	10	0.05242	0.8715	11.5390
					20+27	11	0.03487	0.8877	5.0959
					E	14	-0.05334	0.9874	11.9546
					(F)	15	0.00948	1.0000	0.3764

```
STEP NUMBER    2
VARIABLE ENTERED    14

MULTIPLE R                    0.7562
STD. ERROR OF EST.            0.1464

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    2        119.891          59.945      2796.820
     RESIDUAL    4187         89.742           0.021
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.14679)								
22+25 13	0.72049	0.00966	5567.3779		210	1	0.00675	0.9969	0.1954
E 14	-0.02538	0.00734	11.9566		055	2	-0.01343	0.8830	0.7548
					056	3	0.00092	0.9938	0.0036
					016	4	0.00075	0.9980	0.0024
					3X4	5	0.00400	0.9811	0.0670
					5+6	6	0.03735	0.9773	5.8487
					8+9	7	0.01067	0.9507	0.4753
					49+50	8	0.00329	0.9434	0.0453
					16+17	9	0.04075	0.9943	6.9640
					18+26	10	0.06405	0.8389	17.2448
					20+27	11	0.04473	0.8617	9.3327
					(F)	15	0.01070	0.9995	0.4792

Table 5-15. (Continued)

```
STEP NUMBER    3
VARIABLE ENTERED   11

MULTIPLE R            C.7568
STD. ERROR OF EST.   0.1463

ANALYSIS OF VARIANCE
```

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	123.070	6..023	1070.636
RESIDUAL	4186	89.562	C.021	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.14122)			:				
20+27 11	9.01944	0.00672	3.3927	:	010 1	8.00573	0.9983	3.1374
22+25 13	0.71121	0.01019	4872.6732	:	055 2	-0.01076	8.6790	3.4865
E 14	-0.02037	0.09744	15.2551	:	056 3	0.00111	0.9937	0.6051
				:	016 4	0.00187	0.9974	0.0145
				:	3X4 5	0.00099	0.9767	3.3361
				:	5+6 6	0.03032	0.9769	5.1531
				:	8+9 7	0.01331	0.9474	0.7414
				:	49+58 8	0.00412	C.9431	0.0713
				:	14+17 9	0.04635	0.9808	3.3361
				:	18+26 10	0.04799	0.2710	9.5535
				:	(F) 15	0.01130	0.9994	3.5137

```
STEP NUMBER    4
VARIABLE ENTERED    9

MULTIPLE R            3.7574
STD. ERROR OF EST.   3.1461

ANALYSIS OF VARIANCE
```

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	120.202	30.066	1407.911
RESIDUAL	4185	89.375	C.021	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.12040)			:				
14+17 9	3.03893	0.01298	3.3061	:	010 1	0.00627	0.9981	3 1644
20+27 11	0.02183	0.00676	13.4332	:	055 2	-0.01037	0.8746	3.3530
22+25 13	0.71225	3.01318	4893.5951	:	056 3	0.00104	0.9937	3.3345
E 14	-0.02954	0.00744	15.7744	:	016 4	0.00066	0.9967	0.0318
				:	3X4 5	0.00241	0.9758	3.3244
				:	5+6 6	0.03745	0.9765	5.8754
				:	8+9 7	0.01048	3.9438	3.4593
				:	49+58 8	0.00178	0.9407	0.0133
				:	18+26 10	0.04990	0.2706	10.4438
				:	(F) 15	0.00951	0.9983	3.3788

```
STEP NUMBER    5
VARIABLE ENTERED    6

MULTIPLE R            0.7578
STD. ERROR OF EST.   0.1460

ANALYSIS OF VARIANCE
```

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	120.388	24.078	1128.817
RESIDUAL	4184	89.244	C.021	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.10382)			:				
5+6 6	0.03335	0.01252	5.8754	:	010 1	0.01212	0.9750	0.6148
14+17 9	0.03932	3.01297	3.7256	:	055 2	-0.01671	0.8713	1.1683
20+27 11	3.02212	0.00675	10.7257	:	056 3	0.00659	0.9725	0.1817
22+25 13	0.71385	3.01019	4861.7853	:	016 4	-0.00159	0.9931	3.3136
E 14	-0.03232	0.00753	13.2116	:	3X4 5	0.00260	0.9757	3.0282
				:	8+9 7	0.00923	0.9627	3.3564
				:	49+58 8	-0.00314	0.9246	0.0412
				:	18+26 10	0.04853	0.2702	9.8768
				:	(F) 15	0.00679	0.9929	3.1727

Table 5-15. (Continued)

STEP NUMBER 6
VARIABLE ENTERED 1

MULTIPLE R   0.7579
STD. ERROR OF EST.   0.1461

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	120.431	20.067	940.216
RESIDUAL	4183	99.231	0.021	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.09497)							
Q10 1	0.00722	0.00923	0.5148		Q55 2	-0.01498	0.6196	2.3392
5+6 6	0.03196	0.01257	5.3251		Q56 3	-0.00261	0.4991	0.3284
14+17 9	0.03840	0.0129?	5.7658		Q16 4	-0.00044	0.9061	0.0038
20+27 11	0.02231	0.00676	10.5166		3?4 5	0.00196	0.9730	0.3153
22+25 13	0.71107	0.01023	4861.3919		8+9 7	0.01149	0.9148	0.5522
E 14	-0.03225	0.00751	19.4145		49+50 8	-0.00173	0.9153	0.3156
					18+26 10	0.04071	0.2701	7.3475
					(F) 15	0.00763	0.9886	0.2415

STEP NUMBER 7
VARIABLE ENTERED 7

MULTIPLE R   0.7579
STD. ERROR OF EST.   0.1461

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	120.413	17.202	806.304
RESIDUAL	4182	89.219	0.021	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.09010)							
Q10 1	0.00841	0.00?14	0.9136		Q55 2	-0.02421	0.6298	2.4526
5+6 6	0.03179	0.0.267	5.2936		Q56 3	-0.00170	0.4960	0.3121
8+9 7	0.00867	0.01167	0.5522		Q16 4	-0.00166	0.9433	0.3115
14+17 9	0.03782	0.01300	5.4376		3?4 5	0.00396	0.9451	0.3655
20+27 11	0.02225	0.00676	10.8138		49+50 8	-0.00177	0.9152	0.3121
22+25 13	0.71148	0.01021	4852.3219		18+26 10	0.04923	0.2697	13.1594
E 14	-0.03116	0.00765	15.597?		(F) 15	0.00592	0.9657	0.1466

STEP NUMBER 8
VARIABLE ENTERED 15

MULTIPLE R   0.7579
STD. ERROR OF EST.   0.1461

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	120.416	15.052	705.390
RESIDUAL	4181	89.216	0.021	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08999)							
Q10 1	0.00855	0.00935	0.8353		Q55 2	-0.02452	0.6274	2.5138
5+6 6	0.03149	0.01269	5.1536		Q56 3	-0.00130	0.4937	0.3071
8+9 7	0.00799	0.01181	0.4572		Q16 4	-0.00176	0.9730	0.3129
14+17 9	0.03770	0.01300	5.4376		3?4 5	0.00402	0.9450	0.3574
20+27 11	0.02223	0.00676	10.8328		49+50 8	-0.00177	0.9152	0.3135
22+25 13	0.71145	0.01021	4853.8413		18+26 10	0.04925	0.2697	10.1620
E 14	-0.03129	0.00766	15.5838					
(F) 15	0.00659	0.01721	0.1456					

Table 5-15. (Continued)

```
STEP NUMBER    9
VARIABLE ENTERED    5

MULTIPLE R          0.7579
STD. ERROR OF EST.  0.1461

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   9       120.417          13.380      626.881
        RESIDUAL   4180        89.215           0.021
```

VARIABLES IN EQUATION				·	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	·	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
				·				
(CONSTANT	0.08956)			·				
Q10 1	0.00850	0.00936	0.8246	·	Q55 2	-0.02428	0.6240	2.4660
3X4 5	0.00334	0.01285	0.0674	·	Q56 3	-0.00157	0.4916	0.0132
5+6 6	0.03147	0.01275	6.1453	·	Q16 4	-0.00176	0.9730	0.0129
8+9 7	0.00850	0.01198	0.5038	·	49+58 8	-0.00149	0.9136	0.0092
14+17 9	0.03777	0.01300	8.4364	·	18+26 10	0.04910	0.2688	10.0988
20+27 11	0.02214	0.00678	10.6739	·				
22+25 13	0.71124	0.01025	4815.3537	·				
E 14	-0.03133	0.00766	15.7197	·				
(F) 15	0.00663	0.01721	0.1435	·				

```
STEP NUMBER   10
VARIABLE ENTERED    4

MULTIPLE R          0.7579
STD. ERROR OF EST.  0.1461




ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   10      120.417          12.042      564.061
        RESIDUAL   4179        89.215           0.021
```

VARIABLES IN EQUATION				·	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	·	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
				·				
(CONSTANT	0.09033)			·				
Q10 1	0.00842	0.00938	0.8063	·	Q55 2	-0.02428	0.6240	2.4643
Q16 4	-0.00093	0.00816	0.0129	·	Q56 3	-0.00159	0.4915	0.0136
3X4 5	0.00334	0.01285	0.0674	·	49+58 8	-0.00135	0.9052	0.0077
5+6 6	0.03154	0.01271	6.1558	·	18+26 10	0.04907	0.2681	10.0961
8+9 7	0.00864	0.01194	0.5145	·				
14+17 9	0.03779	0.01301	8.4414	·				
20+27 11	0.02213	0.00671	10.6590	·				
22+25 13	0.71125	0.01025	4815.2052	·				
E 14	-0.03127	0.00768	15.5937	·				
(F) 15	0.00667	0.01722	0.1530	·				

```
F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION




SUMMARY TABLE
```

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	22+25	13	0.7554	0.5707	0.5707	2537.1239	1
2	E	14	0.7562	0.5719	0.0012	11.9546	2
3	20+27	11	0.7563	0.5728	0.0009	8.3927	3
4	14+17	9	0.7576	0.5737	0.0009	9.0041	4
5	5+6	6	0.7578	0.5743	0.0006	5.6764	5
6	Q10	1	0.7579	0.5743	0.0001	0.5148	6
7	8+9	7	0.7579	0.5744	0.0001	0.5522	7
8	(F)	15	0.7579	0.5744	0.0000	0.1466	8
9	3X4	5	0.7579	0.5744	0.0000	0.0674	9
10	Q16	4	0.7579	0.5744	0.0000	0.0129	10

Table 5-16. Desired Volume of Transporting Medium plus
Desired Detail of Transporting Medium

```
SUB-PROBLM    4
 DEPENDENT VARIABLE          (     )
 MAXIMUM NUMBER OF STEPS        64
 F-LEVEL FOR INCLUSION      0.000000
 F-LEVEL FOR DELETION       0.000000
 TOLERANCE LEVEL            0.001000
```

```
 STEP NUMBER    1
 VARIABLE ENTERED    17

 MULTIPLE R              0.1222
 STD. ERROR OF EST.      0.2345

 ANALYSIS OF VARIANCE
                     DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    1        3.426           3.426        62.301
        RESIDUAL   4107      275.847           0.055
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.62156)							
3X4 17	0.15971	0.02023	62.3037	Q10	1	-0.03360	0.9964	4.6420
				Q32	2	0.08372	0.9980	28.9796
				Q55	3	-0.08027	0.9666	26.6252
				Q56	4	-0.02092	0.9905	1.7969
				Q12	5	0.20920	0.9030	187.9280
				Q13	6	0.15986	0.8378	107.6784
				Q14	7	0.15975	0.9984	107.5307
				Q15	8	0.01225	0.9996	0.6158
				Q17	9	-0.21843	0.9912	205.7163
				Q16	10	-0.00039	0.9994	0.0006
				Q23	11	0.26478	0.9950	309.5632
				Q26	12	0.22697	0.9937	223.0133
				Q27	13	0.23714	0.9926	244.6705
				Q28	14	-0.02306	0.9998	2.1879
				Q29	15	-0.02005	0.9966	1.6519
				2+7	16	0.00033	0.9938	0.0004
				5+6	18	0.06452	0.9999	17.1663
				8+9	19	-0.07171	0.9619	21.2206
				49+58	20	0.08696	0.9974	31.2833
				61+62	21	0.09099	0.9931	34.2747
				14+15	22	0.09055	1.0000	33.9462
				14+17	23	-0.06856	0.9976	19.3908
				18+26	24	0.35210	0.9816	581.0747
				20+27	25	0.32860	0.9872	497.0412
				21+24	26	0.75633	0.9909	5488.3030
				(E)	28	0.10181	0.9943	43.0031
				(P)	29	0.08382	0.9975	29.0504
				(F)	30	0.00614	0.9985	0.1548
				(I)	31	0.06735	0.9852	18.7091
				30+31	32	0.04441	0.9992	8.1144

Table 5-16.   (Continued)

```
STEP NUMBER   2
VARIABLE ENTERED   28

MULTIPLE R           0.1586
STD. ERROR OF EST.   0.2333

ANALYSIS OF VARIANCE
                  DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   2        5.767          2.983       52.970
     RESIDUAL    4106     223.506         0.054
```

	VARIABLES IN EQUATION			.		VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.59885)			.				
3X4 17	0.14970	0.02019	54.9831	.	Q10 1	-0.03525	0.9962	5.1064
(E) 28	0.07717	0.01177	43.0051	.	Q32 2	0.07389	0.9872	22.5365
				.	Q55 3	-0.05004	0.8638	10.3059
				.	Q56 4	-0.02830	0.9856	3.2900
				.	Q12 5	0.19989	0.8911	170.8542
				.	Q13 6	0.14863	0.8234	92.8062
				.	Q14 7	0.15094	0.9881	95.7048
				.	Q15 9	0.00639	0.9936	0.0792
				.	Q17 9	-0.21137	0.9835	191.9798
				.	Q16 10	-0.00527	0.9971	0.1148
				.	Q23 11	0.24842	0.9322	269.9808
				.	Q26 12	0.21720	0.9786	203.2544
				.	Q27 13	0.22738	0.9771	223.8150
				.	Q28 14	-0.02243	0.9998	2.0661
				.	Q29 15	-0.02034	0.9966	1.6980
				.	2+7 16	0.00602	0.9907	0.1486
				.	5+6 18	0.05105	0.9903	10.7259
				.	8+9 19	-0.05271	0.9236	11.4368
				.	49+58 20	0.06511	0.9419	17.4775
				.	61+62 21	0.06571	0.9171	17.8019
				.	14+15 22	0.07995	0.9872	26.4068
				.	14+17 23	-0.06864	0.9976	19.4315
				.	18+26 24	0.33995	0.9372	536.3873
				.	20+27 25	0.31670	0.9520	457.6206
				.	21+24 26	0.75666	0.9891	5498.1396
				.	(P) 29	0.05919	0.9211	13.9490
				.	(F) 30	0.00244	0.9977	0.0485
				.	(I) 31	0.05751	0.9749	13.6235
				.	30+31 32	0.04715	0.9985	9.1464

```
STEP NUMBER   3
VARIABLE ENTERED   20

MULTIPLE R           0.1711
STD. ERROR OF EST.   0.2329

ANALYSIS OF VARIANCE
                  DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   3        6.714          2.238       41.281
     RESIDUAL    4105     222.558         0.054
```

	VARIABLES IN EQUATION			.		VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.57418)			.				
3X4 17	0.15566	0.02020	59.3884	.	Q10 1	-0.02785	0.9824	3.1864
49+58 20	0.10155	0.02429	17.4775	.	Q32 2	0.07479	0.9871	23.0855
(E) 28	0.06526	0.01209	29.1553	.	Q55 3	-0.05191	0.8632	11.0890
				.	Q56 4	-0.02002	0.9688	1.6455
				.	Q12 5	0.19343	0.8758	159.5130
				.	Q13 6	0.14201	0.8113	84.4726
				.	Q14 7	0.14835	0.9659	92.3547
				.	Q15 8	0.00550	0.9934	0.1153
				.	Q17 9	-0.21271	0.9833	194.4896
				.	Q16 10	-0.01123	0.9890	0.5181
				.	Q23 11	0.24914	0.9322	271.5983
				.	Q26 12	0.21466	0.9762	198.2398
				.	Q27 13	0.22481	0.9745	218.4633
				.	Q28 14	-0.02799	0.9929	3.2178
				.	Q29 15	-0.01203	0.9799	0.5943
				.	2+7 16	0.00378	0.9896	0.0587
				.	5+6 18	0.04282	0.9628	7.5389
				.	8+9 19	-0.05255	0.9236	11.3659
				.	61+62 21	0.06332	0.9157	16.5229
				.	14+15 22	0.07929	0.9870	25.9624
				.	14+17 23	-0.07158	0.9958	21.1358
				.	18+26 24	0.33988	0.9370	535.9991
				.	20+27 25	0.31689	0.9520	458.1114
				.	21+24 26	0.75588	0.9864	5470.4385
				.	(P) 29	0.05350	0.9157	11.7793
				.	(F) 30	0.00260	0.9976	0.0278
				.	(I) 31	0.05666	0.9747	13.2169
				.	30+31 32	0.04412	0.9962	8.0030

Table 5-16.   (Continued)

STEP NUMBER   4
VARIABLE ENTERED   19

MULTIPLE R   0.1788
STD. ERROR OF EST. 0.2326

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	7.329	1.832	33.861
RESIDUAL	4104	221.944	0.054	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60492)			.				
3X4 17	0.14294	0.02052	43.5137	.	Q10 1	-0.03759	0.9529	5.8054
8+9 19	-0.06280	0.01863	11.3659	.	Q32 2	0.07169	0.9831	21.1985
49+58 20	0.10121	0.02426	17.4051	.	Q55 3	-0.02899	0.6334	3.4504
(E) 28	0.05724	0.01230	21.6476	.	Q56 4	-0.02925	0.9418	3.5123
				.	Q12 5	0.19508	0.8752	162.3217
				.	Q13 6	0.14111	0.8107	83.3624
				.	Q14 7	0.15124	0.9836	96.0459
				.	Q15 8	0.00518	0.9934	0.1101
				.	Q17 9	-0.21096	0.9815	191.1093
				.	Q16 10	-0.00479	0.9740	0.0943
				.	Q23 11	0.24517	0.9207	262.3931
				.	Q26 12	0.21603	0.9758	200.8551
				.	Q27 13	0.22535	0.9745	219.4993
				.	Q28 14	-0.01756	0.9507	1.2653
				.	Q29 15	-0.02105	0.9530	1.8197
				.	2+7 16	0.00512	0.9869	0.1075
				.	5+6 18	0.04467	0.9617	8.2027
				.	61+62 21	0.05467	0.8848	12.3011
				.	14+15 22	0.08050	0.9865	26.8173
				.	14+17 23	-0.06838	0.9916	19.2749
				.	18+26 24	0.33762	0.9330	527.8611
				.	20+27 25	0.31475	0.9486	451.1566
				.	21+24 26	0.75578	0.9857	5463.6460
				.	(P) 29	0.04920	0.9088	9.9543
				.	(F) 30	0.01110	0.9725	0.5053
				.	(I) 31	0.05308	0.9696	11.5944
				.	30+31 32	0.04343	0.9960	7.7511

STEP NUMBER   5
VARIABLE ENTERED   18

MULTIPLE R   0.1841
STD. ERROR OF EST. 0.2323

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	7.772	1.554	28.793
RESIDUAL	4103	221.501	0.054	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.56877)			.				
3X4 17	0.14207	0.02051	47.9933	.	Q10 1	-0.03180	0.9350	4.1533
5+6 18	0.05736	0.02024	3.2027	.	Q32 2	0.07161	0.9831	21.1440
8+9 19	-0.06459	0.01862	12.0235	.	Q55 3	-0.03121	0.6319	3.9996
49+58 20	0.09184	0.02446	14.3958	.	Q56 4	-0.02372	0.9263	2.3098
(E) 28	0.05332	0.01237	18.5932	.	Q12 5	0.19415	0.8746	160.6783
				.	Q13 6	0.14088	0.8107	83.0630
				.	Q14 7	0.15092	0.9835	95.6132
				.	Q15 8	0.00409	0.9928	0.0688
				.	Q17 9	-0.21130	0.9815	191.7042
				.	Q16 10	-0.00692	0.9718	0.1964
				.	Q23 11	0.24317	0.9174	257.8027
				.	Q26 12	0.21551	0.9755	199.7968
				.	Q27 13	0.22558	0.9745	219.9358
				.	Q28 14	-0.01941	0.9491	1.5457
				.	Q29 15	-0.01516	0.9355	0.9428
				.	2+7 16	0.00082	0.9798	0.0028
				.	61+62 21	0.05242	0.8823	11.3036
				.	14+15 22	0.07958	0.9859	26.1404
				.	14+17 23	-0.06887	0.9915	19.5472
				.	18+26 24	0.33705	0.9325	525.7186
				.	20+27 25	0.31506	0.9486	452.0403
				.	21+24 26	0.75521	0.9825	5445.2750
				.	(P) 29	0.04825	0.9084	9.5707
				.	(F) 30	0.00798	0.9676	0.2612
				.	(I) 31	0.05483	0.9683	12.3711
				.	30+31 32	0.04170	0.9944	7.1456

Table 5-16.   (Continued)

STEP NUMBER   6
VAR'ABLE ENTERED   1

MULTIPLE R   0.1867
STD. ERROR OF EST.   0.2323

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	7.996	1.333	24.704
RESIDUAL	4102	221.277	0.054	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.59679)							
Q10 1	-0.03070	0.01506	4.1533		Q32 2	0.07217	0.9828	21.4736
3X4 17	0.14793	0.02050	48.594c		Q55 3	-0.03374	0.6283	4.6734
5+6 18	0.05226	0.02042	5.5491		Q56 4	-0.07263	0.4907	0.0284
8+9 19	-0.07115	0.01889	14.1856		Q12 5	0.19311	0.8731	158.8515
49+58 20	0.08674	0.02458	12.4561		Q13 6	0.14061	0.8106	82.7195
(E) 28	0.05390	0.01237	13.3238		Q14 7	0.15059	0.9833	95.1626
					Q15 8	0.00349	0.9925	0.0500
					Q17 9	-0.21069	0.9809	190.4944
					Q16 10	-0.00916	0.9671	0.3439
					Q23 11	0.24302	0.9174	257.3933
					Q26 12	0.21609	0.9753	200.8836
					Q27 13	0.22639	0.9741	221.5446
					Q28 14	-0.02081	0.9474	1.7772
					Q29 15	0.00370	0.6294	0.0561
					2+7 16	0.00092	0.9798	0.0034
					61+62 21	0.05219	0.8822	11.2001
					14+15 22	0.07894	3.9854	25.7148
					14+17 23	-0.06856	0.9914	19.3660
					18+26 24	0.33688	0.9124	524.9952
					20+27 25	0.31519	0.9486	452.3629
					21+24 26	0.75522	0.9823	5444.2298
					(P) 29	0.04687	0.9065	9.0270
					(F) 30	0.00674	0.9662	0.1863
					(I) 31	0.05562	0.9677	12.7270
					30+31 32	0.04077	0.9934	6.8201

STEP NUMBER   7
VARIABLE ENTERED   3

MULTIPLE R   0.1897
STD. ERROR OF EST.   0.2322

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	8.248	1.178	21.862
RESIDUAL	4101	221.025	0.054	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60490)							
Q10 1	-0.03318	0.01510	4.8272		Q32 2	0.07294	0.9824	21.9312
Q55 3	-0.03908	0.01808	4.6734		Q56 4	-0.00444	0.4893	0.0809
3X4 17	0.13933	0.02056	45.9155		Q12 5	0.19189	0.8713	156.7332
5+6 18	0.05392	0.02043	5.9677		Q13 6	0.13871	0.8068	83.4354
8+9 19	-0.04744	0.02184	4.7184		Q14 7	0.15242	0.9812	97.5162
49+58 20	0.08775	0.02457	12.7543		Q15 8	0.00380	0.9924	0.0591
(E) 28	0.04648	0.01283	13.1248		Q17 9	-0.20998	0.9802	189.1089
					Q16 10	-0.00904	0.9671	0.3349
					Q23 11	0.24292	0.9173	257.1178
					Q26 12	0.21533	0.9745	199.3388
					Q27 13	0.22578	0.9736	220.2300
					Q28 14	-0.02016	0.9470	1.6662
					Q29 15	0.00156	0.6259	0.0100
					2+7 16	0.00233	0.9781	0.0222
					61+62 21	0.05105	0.8813	10.7144
					14+15 22	0.08306	0.9845	26.4480
					14+17 23	-0.06692	0.9886	18.4439
					18+26 24	0.33593	0.9306	521.4855
					20+27 25	0.31427	0.9471	449.3214
					21+24 26	0.75490	0.9805	5432.0949
					(P) 29	0.04660	0.9064	8.9210
					(F) 30	0.00839	0.9639	0.2886
					(I) 31	0.05534	0.9677	12.5953
					30+31 32	0.04032	0.9933	6.6771

Table 5-16.   (Continued)

STEP NUMBER   8
VARIABLE ENTERED   10

MULTIPLE R   0.1899
STD. ERROR OF EST.   0.2322

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	8.266	1.033	19.168
RESIDUAL	4100	221.007	0.054	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60855)							
Q10 1	-0.03370	0.01514	4.9831		Q32 2	0.07303	0.9823	21.9792
Q55 3	-0.03904	0.01808	4.6633		Q56 4	-0.00456	0.4892	0.0051
Q16 10	-0.00757	0.01309	3.3349		Q12 5	0.19238	0.8700	157.5409
3X4 17	0.13936	0.02056	45.9279		Q13 6	0.13920	0.8055	83.9915
5+6 18	0.05436	0.02044	7.3710		Q14 7	0.15254	0.9811	97.6458
8+9 19	-0.04626	0.02193	4.4491		Q15 8	0.00367	0.9922	0.0552
49+58 20	0.08835	0.02465	12.9962		Q17 9	-0.20990	0.9801	188.9121
(E) 28	0.04681	0.01284	13.2838		Q23 11	0.24277	0.9154	256.7215
					Q26 12	0.21525	0.9744	199.1469
					Q27 13	0.22583	0.9735	220.2812
					Q28 14	-0.01897	0.9233	1.4749
					Q29 15	0.00058	0.6194	0.0014
					2+7 16	0.00224	0.9780	0.0205
					61+62 21	0.05072	0.8795	10.5715
					14+15 22	0.08001	0.9845	26.4118
					14+17 23	-0.06678	0.9884	18.3637
					18+26 24	0.33585	0.9290	521.1214
					20+27 25	0.31418	0.9468	448.9116
					21+24 26	0.75488	0.9804	5430.1468
					(P) 29	0.04666	0.9063	8.9445
					(F) 30	0.00058	0.9635	0.3018
					(I) 31	0.05607	0.9634	12.9250
					30+31 32	0.03989	0.9904	6.5342

STEP NUMBER   9
VARIABLE ENTERED   30

MULTIPLE R   0.1901
STD. ERROR OF EST.   0.2322

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	8.282	0.920	17.069
RESIDUAL	4099	220.991	0.054	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60828)							
Q10 1	-0.03350	0.01515	4.8935		Q32 2	0.07288	0.9819	21.8810
Q55 3	-0.03952	0.01810	4.7671		Q56 4	-0.00403	0.4873	0.0666
Q16 10	-0.00772	0.01309	3.3491		Q12 5	0.19223	0.8694	157.2387
3X4 17	0.13944	0.02057	45.9698		Q13 6	0.13911	0.8054	80.8690
5+6 18	0.05366	0.02048	5.5634		Q14 7	0.15245	0.9810	97.5121
8+9 19	-0.04750	0.02205	4.5438		Q15 8	0.00405	0.9903	0.0672
49+58 20	0.08888	0.02465	13.3092		Q17 9	-0.21005	0.9799	189.1531
(E) 28	0.04640	0.01286	13.0112		Q23 11	0.24281	0.9154	256.7395
(F) 30	0.01519	0.02766	0.3318		Q26 12	0.21537	0.9742	199.3226
					Q27 13	0.22595	0.9734	220.4672
					Q28 14	-0.01890	0.9233	1.4650
					Q29 15	0.00101	0.6178	0.0042
					2+7 16	0.00198	0.9771	0.0160
					61+62 21	0.05064	0.8794	10.5376
					14+15 22	0.08030	0.9836	26.5964
					14+17 23	-0.06696	0.9880	18.4585
					18+26 24	0.33580	0.9289	520.8420
					20+27 25	0.31413	0.9467	448.6532
					21+24 26	0.75486	0.9802	5428.1752
					(P) 29	0.04643	0.9056	8.8548
					(I) 31	0.05593	0.9631	12.8596
					30+31 32	0.03980	0.9902	6.5025

Table 5-16. (Continued)

STEP NUMBER　10
VARIABLE ENTERED　4

MULTIPLE R　　　　　0.1901
STD. ERROR OF EST.　0.2322

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	8.286	0.829	15.365
RESIDUAL	4098	220.907	0.054	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60968)							
Q10　1	-0.02985	0 J.077	2.0752		Q32　2	0.07279	0.9811	21.8242
Q55　3	-0.03976	0.u.81.	4.8138		Q12　5	6.19230	0.8492	157.3232
Q56　4	-0.03529	0.02051	3.3656		Q13　6	0.13912	0.8054	80.8631
Q16　10	-0.00776	0.01309	3.3514		Q14　7	0.15260	0.9504	97.6839
3X4　17	0.13971	0.02059	45.0172		Q15　8	0.00423	0.9884	0.0734
5+6　18	0.05345	0.02050	6.7948		Q17　9	-0.21001	0.9796	189.0373
8+9　19	-0.04762	0.02206	4.6613		Q23　11	0.24278	0.9152	256.6076
49+58 20	0.08849	0.02470	12.8357		Q26　12	0.21535	0.9732	199.2410
(E)　28	0.04666	0.01290	13.3745		Q27　13	0.22593	0.9726	223.3686
(F)　30	0.01475	0.02771	3.2833		Q28　14	-0.01911	0.9212	1.4974
					Q29　15	0.00175	0.5983	0.0126
					2+7　16	0.00204	0.9748	0.0171
					61+62 21	0.05050	0.8771	10.4766
					14+15 22	0.08058	0.9814	26.7795
					14+17 23	-0.06687	0.9870	18.4026
					18+26 24	0.33587	0.9277	520.9409
					20+27 25	0.31421	0.9453	448.8069
					21+24 26	0.75486	0.9802	5426.7009
					(P)　29	0.04628	0.9023	8.7922
					(I)　31	0.05509	0.9630	12.8391
					30+31 32	0.03977	0.9901	6.4893

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	3X4	17	0.1222	0.0149	0.0149	62.3007	1
2	(E)	28	0.1585	0.0252	0.0102	43.0031	2
3	49+58	20	0.1711	0.0293	0.0041	17.4775	3
4	8+9	19	0.1789	0.0320	0.0027	11.3659	4
5	5+6	18	0.1841	0.0339	0.0019	8.2027	5
6	Q10	1	0.1867	0.0349	0.0010	4.1533	6
7	Q55	3	0.1897	0.0360	0.0011	4.6734	7
8	Q16	10	0.1899	0.0361	0.0001	0.3349	8
9	(F)	30	0.1901	0.0361	0.0001	0.3018	9
10	Q56	4	0.1901	0.0361	0.0000	0.0666	10

Table 5-17. Usefulness of Title Listings or Abstracts

```
SUB-PROBLM   10
DEPENDENT VARIABLE        25
MAXIMUM NUMBER OF STEPS   64
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED  25
```

MULTIPLE R   0.4091
STD. ERROR OF EST.   0.3753

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	116.334	116.334	825.755
RESIDUAL	4107	578.604	0.141	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.00111)			:				
20+27 25	0.46358	0.01613	825.7552	: 010 1	0.00357	0.9997	0.0522
				: 032 2	0.03240	0.9914	4.3145
				: 055 3	-0.09991	0.9806	41.3960
				: 056 4	0.01957	1.0000	1.5739
				: 012 5	0.08755	0.9617	31.7144
				: 013 6	0.08013	0.9632	26.5364
				: 014 7	0.06632	0.9684	18.1374
				: 015 8	0.07206	0.9985	21.4343
				: 017 9	-0.14875	0.9041	92.9028
				: 216 10	-0.04022	0.9997	6.6519
				: 026 12	-0.02520	0.7321	2.6102
				: 027 13	-0.05284	0.6549	11.4950
				: 028 14	-0.04347	0.9998	7.7752
				: 029 15	0.03139	0.9982	4.0510
				: 2+7 16	-0.04925	0.9999	9.9819
				: 3X4 17	0.02685	0.9872	2.9613
				: 5+6 18	0.09486	0.9993	29.7858
				: 8+9 19	-0.13084	0.9868	71.5157
				: 49+58 20	0.03727	0.9979	5.7108
				: 61+62 21	0.11032	0.9781	50.5853
				: 14+15 22	0.09055	0.9963	33.9443
				: 14+17 23	-0.07081	0.9879	20.6912
				: 18+26 24	0.24196	0.2 :	255.3324
				: 21+24 26	0.10998	0.92.5	50.2739
				: 22+25 27	0.15432	0.8858	100.1665
				: (E) 28	0.19588	0.9618	163.8231
				: (P) 29	0.08905	0.9916	32.8180
				: (F) 30	-0.01263	1.0000	0.6554
				: (I) 31	0.02443	0.9982	2.4525
				: 30+31 32	-0.01522	0.9979	0.9507

```
STEP NUMBER    2
VARIABLE ENTERED   28
```

MULTIPLE R   0.4465
STD. ERROR OF EST.   0.3681

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	138.534	59.267	511.156
RESIDUAL	4106	556.404	0.136	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.04750)			:				
20+27 25	0.42320	0.01613	689.1068	: 010 1	0.00052	0.9994	0.0011
(E) 28	0.24164	0.01888	163.8231	: 032 2	0.01489	0.9832	0.9103
				: 055 3	-0.04096	0.8830	6.8993
				: 056 4	0.00453	0.9940	0.0841
				: 012 5	0.07014	0.9525	20.2975
				: 013 6	0.05904	0.9504	14.3585

Table 5-17. (Continued)

014	7	8.05338	8.9635	11.6958
015	8	8.05672	8.9913	13.2478
017	9	-8.14449	8.9972	87.5257
016	10	-8.05185	3.9972	10.7258
026	12	-8.03220	3.7313	4.2687
027	13	-8.05794	8.6546	13.7774
028	14	-8.04201	8.9996	7.1564
029	15	8.03243	8.9982	4.3221
2+7	16	-8.03901	8.9971	6.5157
3X4	17	8.01645	8.9842	1.1110
5+6	18	8.05960	8.9883	14.6314
8+9	19	-8.09678	8.9503	38.8141
49+58	20	-8.08747	8.9466	9.2292
61+62	21	8.06270	8.9119	14.2814
14+15	22	8.07197	8.9857	21.3761
14+17	23	-8.07616	8.9825	23.9510
18+26	24	8.22708	8.2691	223.1866
21+24	26	8.11321	8.9245	53.2911
22+25	27	8.14803	8.8838	91.9667
(P)	29	8.03873	8.9204	6.1654
(F)	30	-8.01783	8.9994	1.3855
(I)	31	8.00406	8.9573	8.0675
30+31	32	-8.01283	8.9977	8.6761

STEP NUMBER   3
VARIABLE ENTERED   27

MULTIPLE R   0.4657
STD. ERROR OF EST. 0.3641

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	150.726	50.242	378.977
RESIDUAL	4105	544.212	0.133	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.16785)							
20+27 25	0.37069	0.01687	482.7776		010 1	0.00572	0.9982	0.1344
22+25 27	0.24529	0.02558	91.9657		032 2	0.00655	0.9800	0.1761
(E) 28	0.23311	0.01869	155.4841		055 3	-0.03474	0.8813	4.9590
					056 4	0.00691	0.9937	0.1959
					012 5	0.04475	0.9210	8.2337
					013 6	0.03972	0.9328	6.4844
					014 7	0.03786	0.9522	5.8919
					015 8	0.05434	0.9909	12.1523
					017 9	-0.12698	0.8863	67.2517
					016 10	-0.05161	0.9972	10.9601
					026 12	-0.04349	0.7275	7.7777
					027 13	-0.06761	0.6522	18.8487
					028 14	-0.03786	0.9987	5.8923
					029 15	0.03708	0.9974	5.6516
					2+7 16	-0.04161	0.9970	7.1195
					3X4 17	0.00356	0.9767	0.0521
					5+6 18	0.05227	0.9775	11.2440
					8+9 19	-0.09041	0.3478	33.8240
					49+58 20	-0.01649	0.9433	1.1160
					61+62 21	0.05701	0.9103	13.3030
					14+15 22	0.06238	0.9808	16.0328
					14+17 23	-0.07213	0.9814	21.4655
					18+26 24	0.20979	0.2632	188.9412
					21+24 26	0.00612	0.4222	0.1540
					(P) 29	0.03154	0.9180	4.0869
					(F) 30	-0.01022	0.9994	1.3635
					(I) 31	-0.00590	0.9829	0.1429
					30+31 32	-0.02317	0.9931	2.2049

Table 5-17.　(Continued)

STEP NUMBER   4
VARIABLE ENTERED   19

MULTIPLE R   0.4725
STD. ERROR OF EST.   0.3627

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	155.175	38.794	294.962
RESIDUAL	4104	539.763	0.132	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.08255)							
8+9 19	-0.16676	0.02867	33.8240		Q10 1	-0.01005	0.9656	0.4835
20+27 25	0.36516	0.01683	473.7119		Q32 2	0.00103	0.9763	0.0043
22+25 27	0.23780	0.02551	85.8998		Q55 3	0.01519	0.6370	0.9473
(E) 28	0.21212	0.01897	125.0790		Q56 4	-0.00962	0.9613	0.3799
					Q12 5	0.04391	0.9216	7.9253
					Q13 6	0.03316	0.9276	4.5154
					Q14 7	0.04353	0.9408	7.7901
					Q15 8	0.05448	0.9909	12.2151
					Q17 9	-0.12484	0.8855	64.9603
					Q16 10	-0.04087	0.9819	6.8662
					Q26 12	-0.03863	0.7252	6.1321
					Q27 13	-0.06386	0.6509	16.8025
					Q28 14	-0.01987	0.9569	1.6204
					Q29 15	0.02209	0.9684	2.0024
					2+7 16	-0.04074	0.9969	6.8225
					3X4 17	-0.01242	0.9471	0.6326
					5+6 18	0.05570	0.9763	12.7697
					49+58 20	-0.01546	0.9432	0.9815
					61+62 21	0.04123	0.8794	6.9870
					14+15 22	0.06531	0.9800	17.5783
					14+17 23	-0.06692	0.9776	18.4597
					18+26 24	0.20772	0.2627	185.0267
					21+24 26	0.00796	0.4220	0.2601
					(P) 29	0.02399	0.9113	2.3624
					(F) 30	-0.00350	0.9727	0.0504
					(I) 31	-0.01388	0.9755	0.7902
					30+31 32	-0.02508	0.9927	2.5823

STEP NUMBER   5
VARIABLE ENTERED   22

MULTIPLE R   0.4760
STD. ERROR OF EST.   0.3619

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	157.478	31.496	240.439
RESIDUAL	4103	537.461	0.131	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.10836)							
8+9 19	-0.17027	0.02863	35.3729		Q10 1	-0.00935	0.9650	0.3588
14+15 22	0.10342	0.02467	17.5783		Q32 2	0.00301	0.9754	0.0373
20+27 25	0.36412	0.01680	469.8323		Q55 3	0.01279	0.6361	0.6714
22+25 27	0.23010	0.02552	81.2744		Q56 4	-0.01077	0.9610	0.4756
(E) 28	0.20379	0.01903	114.6485		Q12 5	0.03883	0.9156	6.1956
					Q13 6	0.03090	0.9264	3.9203
					Q14 7	0.00474	0.5967	0.0923
					Q15 8	-0.00474	0.2411	0.0923
					Q17 9	-0.12547	0.8855	65.6119
					Q16 10	-0.04588	0.9819	6.8669
					Q26 12	-0.03964	0.7250	6.4570
					Q27 13	-0.06561	0.6505	17.7331
					Q28 14	-0.02263	0.9553	2.1014
					Q29 15	0.02332	0.9681	2.2311
					2+7 16	-0.04412	0.9945	8.0020
					3X4 17	-0.01183	0.9470	0.5745
					5+6 18	0.05437	0.9758	12.1598
					49+58 20	-0.01606	0.9431	1.0584
					61+62 21	0.04106	0.8794	6.9257
					14+17 23	-0.10218	0.8184	43.2796
					18+26 24	0.20881	0.2629	187.0036
					21+24 26	0.00765	0.4220	0.2401
					(P) 29	0.02630	0.9102	2.8390
					(F) 30	-0.00182	0.9720	0.0136
					(I) 31	-0.01435	0.9754	0.8444
					30+31 32	-0.02021	0.9870	1.6757

Table 5-17. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   18

MULTIPLE R   0.4784
STD. ERROR OF EST.   0.3614

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	159.066	26.511	202.937
RESIDUAL	4102	535.072	0.131	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.17767)							
5+6 18	0.18898	0.03125	12.1598		Q10 1	-0.00132	0.9430	0.0072
8+9 19	-0.17370	0.02861	35.8677		Q32 2	0.00304	0.9754	0.0379
14+15 22	0.10149	0.02464	15.9655		Q55 3	0.00998	0.6343	0.4004
26+27 25	0.36510	0.01678	473.5196		Q56 4	-0.00304	0.9414	0.0379
22+25 27	0.22931	0.02553	77.4077		Q12 5	0.03713	0.9146	5.6610
(E) 28	0.19466	0.01919	132.9398		Q13 6	0.03002	0.9261	3.6988
					Q14 7	0.00494	0.5969	0.1000
					Q15 8	-0.00494	0.2411	0.1000
					Q17 9	-0.12634	0.8854	66.5183
					Q16 10	-0.04421	0.9785	0.0313
					Q26 12	-0.04094	0.7247	6.8867
					Q27 13	-0.06590	0.6505	17.8049
					Q28 14	-0.02553	0.9527	2.6749
					Q29 15	0.03179	0.9468	4.1486
					2+7 16	-0.04901	0.9848	10.1901
					3X4 17	-0.01191	0.9470	0.5819
					49+55 20	-0.02337	0.9271	2.2405
					61+62 21	0.03811	0.8766	5.9646
					14+17 23	-0.10279	0.8183	43.7906
					18+26 24	0.20732	0.2625	184.1932
					21+24 26	0.00567	0.4214	0.1316
					(P) 29	0.02457	0.9094	2.4975
					(F) 30	-0.00575	0.9670	0.1735
					(I) 31	-0.01231	0.9740	0.6220
					30+31 32	-0.02271	0.9853	2.1159

STEP NUMBER   7
VARIABLE ENTERED   10

MULTIPLE R   0.4800
STD. ERROR OF EST.   0.3611

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	160.113	22.873	175.391
RESIDUAL	4101	534.825	0.130	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.15229)							
Q16 10	-0.05736	0.02924	8.0313		Q10 1	-0.00477	0.9382	0.0934
5+6 18	0.11418	0.03128	13.3264		Q32 2	0.00339	0.9753	0.0470
8+9 19	-0.16372	0.02880	32.3212		Q55 3	0.01048	0.6343	0.4541
14+15 22	0.10131	0.02462	15.9359		Q56 4	-0.00600	0.9372	0.1478
26+27 25	0.36431	0.01677	472.1526		Q12 5	0.03949	0.9122	6.4052
22+25 27	0.22554	0.02550	78.1970		Q13 6	0.03221	0.9240	4.2578
(E) 28	0.19816	0.01921	106.4128		Q14 7	0.00607	0.5965	0.1510
					Q15 8	-0.00607	0.2409	0.1510
					Q17 9	-0.12616	0.8853	66.3083
					Q26 12	-0.04096	0.7247	6.8905
					Q27 13	-0.06509	0.6503	17.4447
					Q28 14	-0.01842	0.9261	1.3919
					Q29 15	0.02598	0.9287	2.7690
					2+7 16	-0.05022	0.9847	10.3661
					3X4 17	-0.01211	0.9470	0.6011
					49+50 20	-0.01972	0.9205	1.5943
					61+62 21	0.03650	0.8753	5.4696
					14+17 23	-0.10201	0.8180	43.1158
					18+26 24	0.20552	0.2518	180.8120
					21+24 26	0.00554	0.4214	0.1259
					(P) 29	0.02543	0.9091	2.6528
					(F) 30	-0.00469	0.9665	0.0902
					(I) 31	-0.00946	0.9699	0.3671
					30+31 32	-0.02495	0.9826	2.5539

Table 5-17.   (Continued)

```
STEP NUMBER    8
VARIABLE ENTERED    6

MULTIPLE R              3.4808
STD. ERROR OF EST.     3.3610

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION      8       160.668          20.084       194.121
     RESIDUAL      4133       534.270          3.138
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.15348)								
013 5	3.03310	0.01604	4.2374		010	1	-0.00472	0.9382	3.0914
016 10	-0.05937	0.02025	8.5937		032	2	9.00200	0.9735	0.0164
5+6 14	0.11325	0.03127	13.117.		055	3	0.01324	0.6770	0.7190
8+9 13	-0.15843	0.02888	33.2390		056	4	-0.00654	0.9370	0.1753
14+15 22	0.09390	0.02442	15.3232		012	5	0.02415	0.5036	2.3329
20+27 25	0.36235	0.01687	455.3243		014	7	0.00171	0.5855	0.0120
.2+25 27	0.21471	0.02571	72.3039		015	8	-0.00171	0.2365	0.0120
(E) 2c	0.19463	0.01927	102.2217		017	9	-0.12329	0.8731	63.2689
					026	12	-0.04326	0.7213	7.6448
					027	13	-0.06733	0.6476	18.6647
					028	14	-0.01917	0.9251	1.5074
					029	15	0.02600	0.9298	2.7897
					2+7	16	-0.04902	0.9032	9.8745
					3+4	17	-0.02613	6.0134	2.8808
					49+58	20	-0.02221	0.9153	2.0221
					61+62	21	0.03496	0.8732	5.0231
					14+17	23	-0.10141	0.8176	42.5954
					18+26	24	0.20362	0.2599	177.2928
					21+24	26	0.00645	0.421.	0.1707
					(P)	29	0.02306	0.9039	2.1804
					(F)	30	-0.00480	0.9664	0.0943
					(I)	31	-0.02075	0.8724	1.7662
					30+31	32	-0.02417	0.9824	2.4750

```
STEP NUMBER    9
VARIABLE ENTERED    17

MULTIPLE R              3.4814
STD. ERROR OF EST.     3.3609

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION      9       161.033          17.893       137.360
     RESIDUAL      4099       533.905          0.130
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.14534)								
013 5	5.04398	0.01730	5.4395		010	1	-0.00385	0.9372	0.0606
016 10	-0.05518	0.02026	3.9252		032	2	0.00194	0.9735	0.0155
3+4 17	-0.05778	0.03453	2.8038		055	3	0.01193	6.6281	0.5835
5+6 14	0.11303	0.03126	13.0638		056	4	-0.00485	0.9330	0.0963
8+9 13	-0.16629	0.02922	32.3898		012	5	0.02566	0.5021	2.6871
14+15 22	0.09449	0.02463	15.9936		014	7	0.00109	0.5851	0.0048
20+27 25	0.36303	0.01687	457.5954		015	8	-0.00109	0.2363	0.0048
22+25 27	0.22017	0.02572	73.2956		017	9	-0.12335	0.8731	63.3113
(E) 29	0.19435	0.01927	101.7453		026	12	-0.04323	0.7213	7.6742
					027	13	-0.06727	0.6476	18.6315
					028	14	-0.01868	0.9253	1.4297
					029	15	0.02692	0.9279	2.9713
					2+7	16	-0.04650	0.9719	7.8808
					49+58	20	-0.02533	0.903.	2.6309
					61+62	21	0.03504	0.8732	5.0375
					14+17	23	-0.10182	0.8175	42.9314
					18+26	24	0.20432	0.2598	178.5375
					21+24	26	0.00700	0.4209	0.2006
					(P)	29	0.02245	0.9033	2.0658
					(F)	30	-0.00520	0.9662	0.1107
					(I)	31	-0.02149	0.8718	1.8935
					30+31	32	-0.02374	0.9814	2.3108

Table 5-17.   (Continued)

```
STEP NUMBER   10
VARIABLE ENTERED   20

MULTIPLE R          0.4819
STD. ERROR OF EST.  0.3608

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION  10       161.376        16.138      123.944
        RESIDUAL    4098      533.563         0.130
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.13761)			:					
Q13 6	0.04714	0.01741	7.3320	:	Q10	1	-0.00622	0.9291	0.1587
Q16 10	-0.05758	0.02032	5.0320	:	Q32	2	0.00141	0.9731	0.0082
3X4 17	-0.06416	0.03474	3.4096	:	Q55	3	0.01281	0.6274	0.6726
5+6 18	0.11942	0.03151	14.3672	:	Q56	4	-0.00767	0.9218	0.2409
8+9 19	-0.16697	0.02922	32.6587	:	Q12	5	0.02712	0.5005	3.0150
49+58 20	-0.06234	0.03843	2.6339	:	Q14	7	0.00180	0.5847	0.0133
14+15 22	0.09851	0.02462	15.0390	:	Q15	8	-0.00180	0.2361	0.0133
20+27 25	0.36023	0.01687	456.0595	:	Q17	9	-0.12255	0.8720	62.4732
22+25 27	0.22212	0.02574	74.4679	:	Q26	12	-0.04226	0.7202	7.3302
(E) 28	0.20047	0.01963	104.2956	:	Q27	13	-0.06620	0.6462	18.0336
				:	Q28	14	-0.01702	0.9211	1.1477
				:	Q29	15	0.02448	0.9184	2.4571
				:	2+7	16	-0.04575	0.9710	8.5943
				:	61+6c	21	0.03578	0.8725	5.2523
				:	14+17	23	-0.10080	0.8158	42.0545
				:	18+26	24	0.20424	0.2598	178.34.4
				:	21+24	26	0.00713	0.4209	0.2080
				:	(P)	29	0.02403	0.9000	2.3680
				:	(F)	30	-0.00518	0.9662	0.1097
				:	(I)	31	-0.02213	0.8717	2.0079
				:	30+31	32	-0.02256	0.9792	2.0868

```
STEP NUMBER   11
VARIABLE ENTERED   3

MULTIPLE R          0.4820
STD. ERROR OF EST.  0.3608

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION  11       161.463        14.678      112.728
        RESIDUAL    4097      533.475         0.130
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.14124)			:					
Q55 3	0.02306	0.02812	0.6726	:	Q10	1	-0.00527	0.9237	0.1136
Q13 6	0.04804	0.01745	7.5851	:	Q32	2	0.00106	0.9724	0.0046
Q16 10	-0.05776	0.02032	5.0822	:	Q56	4	-0.00651	0.9139	0.1734
3X4 17	-0.06282	0.03478	3.2617	:	Q12	5	0.02709	0.5004	3.0075
5+6 18	0.11817	0.03154	14.3355	:	Q14	7	0.00112	0.5830	0.0052
8+9 19	-0.18113	0.03394	29.4824	:	Q15	8	-0.00112	0.2355	0.0052
49+58 20	-0.06342	0.03846	2.7196	:	Q17	9	-0.12262	0.8720	62.5259
14+15 22	0.09774	0.02464	15.7355	:	Q26	12	-0.04217	0.7201	7.2977
20+27 25	0.36058	0.01687	455.6192	:	Q27	13	-0.06621	0.6462	18.0351
22+25 27	0.22246	0.02574	74.6675	:	Q28	14	-0.01731	0.9207	1.2275
(E) 28	0.20477	0.02032	101.5636	:	Q29	15	0.02581	0.9102	2.7304
				:	2+7	16	-0.04624	0.9697	8.7770
				:	61+62	21	0.03616	0.8718	5.3634
				:	14+17	23	-0.10130	0.8148	42.4640
				:	18+26	24	0.20439	0.2598	178.5698
				:	21+24	26	0.00749	0.4206	0.2299
				:	(P)	29	0.02401	0.9000	2.3617
				:	(F)	30	-0.00587	0.9635	0.1409
				:	(I)	31	-0.02225	0.8712	2.0287
				:	30+31	32	-0.02242	0.9790	2.0606

Table 5-17.   (Continued)

STEP NUMBER   12
VARIABLE ENTERED   4

MULTIPLE R   0.4821
STD. ERROR OF EST.   0.3609

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	161.484	13.457	103.328
RESIDUAL	4096	533.452	0.130	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.13215)			.					
Q55 3	0.02197	0.02824	0.6050	.	Q10	1	-0.00112	0.4924	0.0052
Q56 4	-0.00970	0.02328	0.1734	.	Q32	2	0.00103	0.9723	0.0043
Q13 6	0.04802	0.01745	7.5753	.	Q12	5	0.02698	0.5003	2.9835
Q16 10	-0.05824	0.02035	5.1871	.	Q14	7	0.00115	0.5830	0.0055
3X4 17	-0.06211	0.03483	3.1837	.	Q15	8	-0.00115	0.2355	0.0055
5+6 18	0.11656	0.03178	13.4528	.	Q17	9	-0.12251	0.8716	62.4006
8+9 19	-0.18243	0.03409	28.6449	.	Q26	12	-0.04216	0.7201	7.2911
49+58 20	-0.05514	0.03868	2.0358	.	Q27	13	-0.06613	0.6461	17.9842
14+15 22	0.09800	0.02465	15.8059	.	Q28	14	-0.01770	0.9178	1.2831
20+27 25	0.36041	0.01688	455.7959	.	Q29	15	0.03345	0.6859	4.5880
22+25 27	0.22225	0.02575	74.4859	.	2+7	16	-0.04616	0.9696	8.7447
(E) 28	0.20527	0.02036	101.6971	.	61+62 21		0.03591	0.6791	5.2869
				.	14+17 23		-0.10119	0.8145	42.3620
				.	18+26 24		0.20431	0.2597	178.3821
				.	21+24 26		0.00754	0.4205	0.2327
				.	(P)	29	0.02359	0.8951	2.2798
				.	(F)	30	-0.00632	0.9591	0.1635
				.	(I)	31	-0.02217	0.8710	2.0135
				.	30+31 32		-0.02263	0.9782	2.0983

STEP NUMBER   13
VARIABLE ENTERED   30

MULTIPLE R   0.4821
STD. ERROR OF EST.   0.3609

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	13	161.507	12.424	95.373
RESIDUAL	4095	533.431	0.130	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.13155)			.					
Q55 3	0.02250	0.02828	0.6333	.	Q10	1	-0.00102	0.4923	0.0042
Q56 4	-0.01033	0.02334	0.1950	.	Q32	2	0.00113	0.9721	0.0053
Q13 6	0.04810	0.01745	7.5937	.	Q12	5	0.02717	0.4999	3.0234
Q16 10	-0.05839	0.02036	8.1437	.	Q14	7	0.00137	0.5823	0.0077
3X4 17	-0.06725	0.03483	3.1931	.	Q15	8	-0.00137	0.2352	0.0077
5+6 18	0.11731	0.03184	13.5757	.	Q17	9	-0.12241	0.6712	62.2800
8+9 19	-0.18104	0.03426	27.9239	.	Q26	12	-0.04228	0.7199	7.3333
49+58 20	-0.06527	0.03869	2.8451	.	Q27	13	-0.06626	0.6450	18.0549
14+15 22	0.09772	0.02466	15.6994	.	Q28	14	-0.01776	0.9177	1.2913
20+27 25	0.36043	0.01688	455.7513	.	Q29	15	0.03327	0.6852	4.5370
22+25 27	0.22232	0.02575	74.5157	.	2+7	16	-0.04598	0.9685	8.6724
(E) 28	0.20577	0.02040	101.7868	.	61+62 21		0.03594	0.8701	5.2962
(F) 30	-0.01742	0.04309	0.1635	.	14+17 23		-0.10103	0.8134	42.2153
				.	18+26 24		0.20431	0.2597	178.3367
				.	21+24 26		0.00761	0.4205	0.2371
				.	(P)	29	0.02374	0.8946	2.3093
				.	(I)	31	-0.02208	0.8709	1.9978
				.	30+31 32		-0.02258	0.9781	2.0882

Table 5-17. (Continued)

```
STEP NUMBER   14
VARIABLE ENTERED   1

MULTIPLE R            0.4821
STD. ERROR OF EST.    0.3610

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
       REGRESSION  14       161.508        11.536      88.539
       RESIDUAL  4094       533.431         0.130
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.13083)							
Q10 1	-0.00210	0.03227	0.0042		Q32 2	0.00117	0.9710	0.0056
Q55 3	0.02247	0.02829	0.6311		Q12 5	0.02715	0.4993	3.0184
Q56 4	-0.00891	0.03195	0.0778		Q14 7	0.00138	0.5823	0.0078
Q13 6	0.04809	0.01745	7.5929		Q15 8	-0.00138	0.2352	0.0078
Q16 10	-0.05814	0.02038	9.1431		Q17 9	-0.12241	0.8711	62.2607
3X4 17	-0.06229	0.03484	3.1957		Q26 12	-0.04227	0.7194	7.3272
5+6 18	0.11718	0.03191	13.4882		Q27 13	-0.06626	0.6453	18.0488
8+9 19	-0.18116	0.03432	27.8642		Q28 14	-0.01775	0.9177	1.2897
49+58 20	-0.06533	0.03870	2.8490		Q29 15	0.03603	0.5972	5.3205
14+15 22	0.09765	0.02469	15.6383		2+7 16	-0.04598	0.9685	8.6726
20+27 25	0.36047	0.016..	455.2330		61+62 21	0.03598	0.8695	5.3059
22+25 27	0.22228	0.02577	74.4148		14+17 23	-0.10102	0.8133	42.2010
(E) 28	0.20571	0.02042	101.4996		18+26 24	0.20431	0.2597	178.2940
(F) 30	-0.01738	0.04310	0.1626		21+24 26	0.00762	0.4205	0.2377
					(P) 29	0.02375	0.8945	2.3105
					(I) 31	-0.02206	0.8699	1.9933
					30+31 32	-0.02260	0.9777	2.0923

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	20+27	25	0.4091	0.1674	0.1674	825.7552	1
2	(E)	28	0.4465	0.1993	0.0319	163.8231	2
3	22+25	27	0.4657	0.2169	0.0175	91.9667	3
4	8+9	19	0.4725	0.2233	0.0064	33.8240	4
5	14+15	22	0.4760	0.2266	0.0033	17.5733	5
6	5+6	18	0.4784	0.2289	0.0023	12.1598	6
7	Q16	10	0.4800	0.2304	0.0015	8.0313	7
8	Q13	6	0.4808	0.2312	0.0008	4.2578	8
9	3X4	17	0.4814	0.2317	0.0005	2.8008	9
10	49+58	20	0.4819	0.2322	0.0005	2.6309	10
11	Q55	3	0.4820	0.2323	0.0001	0.6726	11
12	Q56	4	0.4821	0.2324	0.0000	0.1734	12
13	(F)	30	0.4821	0.2324	0.0000	0.1635	13
14	Q10	1	0.4821	0.2324	0.0000	0.0042	14

Table 5-18. Class of Information

```
SUB-PROBLM   2
DEPENDENT VARIABLE
MAXIMUM NUMBER OF STEPS      64
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER   1
VARIABLE ENTERED   19

MULTIPLE R            0.2010
STD. ERROR OF EST.   0.2682

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   1        12.445          12.445      172.972
        RESIDUAL   4107       295.491          0.072
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.37341)								
8+9 19	0.27155	0.02065	172.9719		Q10	1	-0.05800	0.9679	13.8574
					Q32	2	0.01044	0.9919	0.4476
					Q55	3	0.01520	0.6875	0.9486
					Q56	4	-0.07699	0.9638	24.4848
					Q12	5	0.05187	0.9964	11.0767
					Q13	6	0.03895	0.9854	6.2392
					Q14	7	0.07977	0.9997	26.2968
					Q15	8	0.00535	0.9998	0.1175
					Q17	9	-0.03737	0.9942	5.7406
					Q16	10	0.17055	0.9872	123.0059
					Q23	11	-0.00019	0.9726	0.0001
					Q26	12	0.09811	0.9996	39.9100
					Q27	13	0.09437	0.9986	36.8964
					Q29	15	-0.17270	0.9715	126.2338
					2+7	16	0.04041	0.9996	6.7175
					3X4	17	0.02748	0.9619	3.1034
					5+6	18	0.05619	1.0000	13.0050
					49+58	20	0.08939	0.9984	33.0733
					61+62	21	0.03219	0.9427	4.2632
					14+15	22	0.04463	1.0000	8.1961
					14+17	23	0.02322	0.9947	2.2153
					18+26	24	0.03532	0.9834	5.1273
					20+27	25	0.03928	0.9868	6.3457
					21+24	26	-0.00776	0.9972	0.2472
					22+25	27	-0.00579	0.9912	0.1375
					(E)	28	0.03523	0.9559	5.1026
					(P)	29	0.04363	0.9793	7.8312
					(F)	30	0.00451	0.9761	0.3836
					(I)	31	-0.17919	0.9874	136.2154
					30+31	32	-0.00630	0.9998	0.1630

```
STEP NUMBER   2
VARIABLE ENTERED   10

MULTIPLE R            0.2614
STD. ERROR OF EST.   0.2643

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   2        21.040          10.520      150.558
        RESIDUAL   4106       286.895          0.070
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.28754)								
Q16 10	0.16358	0.01475	123.0059		Q10	1	-0.04403	0.9606	7.9740
8+9 19	0.24590	0.02048	144.1815		Q32	2	0.00828	0.9918	0.2814
					Q55	3	0.01630	0.6875	1.0903
					Q56	4	-0.06603	0.9590	17.9755
					Q12	5	0.04270	0.9931	7.4973
					Q13	6	0.03013	0.9825	3.7295

Table 5-18.   (Continued)

•	Q14	7	0.07673	0.9991	24.3121
•	Q15	8	0.0065-	0.9998	3.1812
•	Q17	9	-0.03...	0.9942	6.2138
•	Q23	11	0.00418	0.9720	0.0716
•	Q26	12	0.09909	0.9995	40.7389
•	Q27	13	0.09301	0.9983	35.8226
•	Q29	15	-0.15151	0.9506	96.4453
•	2+7	16	0.04206	0.9996	7.2737
•	3X4	17	0.02831	0.9619	3.2924
•	5+6	18	0.04530	0.9953	8.4418
•	49+58	20	0.07291	0.9873	21.9365
•	61+62	21	0.03560	0.9425	5.2381
•	14+15	22	0.04411	0.9999	8.0043
•	14+17	23	0.01997	0.9943	1.6384
•	18+26	24	0.04006	0.9828	6.5990
•	20+27	25	0.04047	0.9868	6.7358
•	21+24	26	-0.00827	0.9972	3.2807
•	22+25	27	-0.00713	0.9912	0.2089
•	(E)	28	0.02344	0.9510	2.2560
•	(P)	29	0.03811	0.9781	5.9695
•	(F)	30	-0.00099	0.9751	0.0040
•	(I)	31	-0.19423	0.9828	160.9289
•	30+31	32	0.00172	0.9976	0.0122

STEP NUMBER   3
VARIABLE ENTERED   18

MULTIPLE R   5
STD. ERROR OF EST.

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	21.629	7.210	103.368
RESIDUAL	4105	286.307	0.070	

VARIABLES IN EQUATION				•	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	•	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.24289)			•				
Q16 10	0.16064	0.01477	118.2942	•	Q10	1	-0.03783	0.9399	5.8819
5+6 18	0.06559	0.02261	8.4418	•	Q32	2	0.00765	0.9916	0.2400
8+9 19	0.24625	0.02046	144.8593	•	Q55	3	0.01580	0.6874	1.0248
				•	Q56	4	-0.06064	0.9423	15.1470
				•	Q12	5	0.04024	0.9899	6.6572
				•	Q13	6	0.02840	0.9809	3.3128
				•	Q14	7	0.07544	0.9981	23.4879
				•	Q15	8	0.00515	0.9987	0.1388
				•	Q17	9	-0.03855	0.9941	6.1086
				•	Q23	11	0.00002	0.9638	0.0000
				•	Q26	12	0.09739	0.9978	39.2965
				•	Q27	13	0.09205	0.9978	35.0717
				•	Q29	15	-0.14664	0.9306	90.1844
				•	2+7	16	0.03805	0.9910	5.9513
				•	3X4	17	0.02785	0.9618	3.1861
				•	49+58	20	0.06676	0.9636	18.3708
				•	61+62	21	0.03159	0.9345	4.0993
				•	14+15	22	0.04229	0.9982	7.3513
				•	14+17	23	0.01934	0.9941	1.5360
				•	18+26	24	0.03772	0.9800	5.8466
				•	20+27	25	0.03930	0.9861	6.3481
				•	21+24	26	-0.01142	0.9925	3.5351
				•	22+25	27	-0.01013	0.9869	0.4209
				•	(E)	28	0.01730	0.9325	1.2287
				•	(P)	29	0.03523	0.9738	5.1002
				•	(F)	30	-0.00450	0.9693	0.3830
				•	(I)	31	-0.19333	0.9821	159.3531
				•	30+31	32	-0.00035	0.9955	0.0005

Table 5-18. (Continued)

```
STEP NUMBER    4
VARIABLE ENTERED    1

MULTIPLE R              0.2675
STD. ERROR OF EST.      0.2639

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   4        22.338           5.510       79.089
        RESIDUAL    4104      285.993          0.070
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT | 0.28109)			.					
Q10 1	-0.04141	0.01708	5.8819	.	Q32	2	0.03838	0.9912	3.2881
Q16 10	0.15787	0.01481	113.6925	.	Q55	3	0.01288	0.6832	0.6805
5+6 18	0.05756	0.02284	5.3434	.	Q56	4	-0.04772	0.4976	9.3441
8+9 19	0.23759	0.02076	131.0092	.	Q12	5	-0.03887	0.9685	6.2088
				.	Q13	6	0.02819	0.9809	3.2621
				.	Q14	7	0.07495	0.9979	23.1765
				.	Q15	8	0.00445	0.9983	0.0814
				.	Q17	9	-0.03778	0.9937	5.8861
				.	Q23	11	-0.00031	0.9637	0.0004
				.	Q26	12	0.09790	0.9977	39.7046
				.	Q27	13	0.09283	0.9974	35.6639
				.	Q29	15	-0.15264	0.6242	97.8825
				.	2+7	16	0.03815	0.9910	5.9817
				.	3X4	17	0.02894	0.9610	3.4381
				.	49+58	20	0.06353	0.9551	16.6246
				.	61+62	21	0.03117	0.9344	3.9913
				.	14+15	22	0.04149	0.9977	7.0750
				.	14+17	23	0.01963	0.9940	1.5823
				.	18+26	24	0.03734	0.9798	5.7288
				.	20+27	25	0.03936	0.9861	6.3650
				.	21+24	26	-0.01204	0.9922	0.5952
				.	22+25	27	-0.01143	0.9858	0.5359
				.	(E)	28	0.01758	0.9324	1.2689
				.	(P)	29	0.03348	0.9716	4.6049
				.	(F)	30	-0.00593	0.9679	0.1444
				.	(I)	31	-0.19243	0.9813	157.7785
				.	30+31	32	-0.00179	0.9941	0.0131

```
STEP NUMBER    5
VARIABLE ENTERED    24

MULTIPLE R              0.2699
STD. ERROR OF EST.      0.2638

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   5        22.437           4.487       64.490
        RESIDUAL    4103      285.499          0.070
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
				.					
(CONSTANT | 0.26221)			.					
Q10 1	-0.04097	0.01707	5.7640	.	Q32	2	0.00550	0.9852	0.1241
Q16 10	0.15888	0.01480	115.2039	.	Q55	3	0.01680	0.6760	1.1584
5+6 18	0.05474	0.02286	5.7321	.	Q54	4	-0.04736	0.4975	9.2197
8+9 19	0.24386	0.02091	135.0045	.	Q12	5	0.03144	0.9405	4.0578
18+26 24	0.02627	0.01097	5.7288	.	Q13	6	0.02083	0.9377	1.7803
				.	Q14	7	0.06935	0.9648	19.8239
				.	Q15	8	0.00625	0.9960	0.1603
				.	Q17	9	-0.02748	0.8959	3.0990
				.	Q23	11	-0.01918	0.7685	1.5098
				.	Q26	12	0.09411	0.6680	36.6544
				.	Q27	13	0.08672	0.6913	31.0806
				.	Q29	15	-0.15416	0.6235	99.8559
				.	2+7	16	0.03802	0.9909	5.9384
				.	3X4	17	0.02487	0.9486	2.5392
				.	49+58	20	0.06198	0.9532	15.8187
				.	61+62	21	0.02694	0.9211	2.9797
				.	14+15	22	0.03955	0.9948	6.4274
				.	14+17	23	0.02474	0.9771	2.5112
				.	20+27	25	0.01443	0.2713	0.8546
				.	21+24	26	-0.02432	0.9038	2.4267
				.	22+25	27	-0.02633	0.8629	2.8455
				.	(E)	28	0.01046	0.8964	0.4487
				.	(P)	29	0.03032	0.9640	3.7747
				.	(F)	30	-0.00643	0.9677	0.1698
				.	(I)	31	-0.19361	0.9806	159.7434
				.	30+31	32	-0.00028	0.9924	0.0003

Table 5-13. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   17

MULTIPLE R   0.2710
STD. ERROR OF EST.   0.2637

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	22.614	3.769	34.185
RESIDUAL	4102	285.323	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.25691)							
Q10 1	-0.04177	0.01707	5.9857		Q32 2	0.00504	0.9849	0.1044
Q16 10	0.15883	0.01480	115.1552		Q55 3	0.01881	0.6719	1.4511
3X4 17	0.03723	0.02336	2.5332		Q56 4	-0.04907	0.4955	5.8985
5+6 18	0.05441	0.02286	5.6652		Q12 5	0.02528	0.8602	2.6225
8+9 19	0.24970	0.02123	138.3994		Q13 6	0.01236	0.8042	0.6267
18+26 24	0.02427	0.01104	4.8238		Q14 7	0.06880	0.9642	19.5027
					Q15 8	0.00668	0.9957	0.1831
					Q17 9	-0.02631	0.8938	2.8465
					Q23 11	-0.01885	0.7683	1.4579
					Q26 12	0.09387	0.6480	36.4576
					Q27 13	0.08626	0.6910	30.7410
					Q29 15	-0.15448	0.6234	100.2609
					2+7 16	0.03608	0.9840	5.3455
					49+58 20	0.06377	0.9491	16.7461
					61+62 21	0.02636	0.9206	2.8506
					14+15 22	0.03961	0.9948	6.4444
					14+17 23	0.02528	0.9766	2.6233
					20+27 25	0.01461	0.2713	0.8759
					21+24 26	-0.02575	0.9010	2.7219
					22+25 27	-0.02820	0.8584	3.2644
					(E) 28	0.01014	0.8963	0.4216
					(P) 29	0.03001	0.9638	3.6963
					(F) 30	-0.00617	0.9676	0.1562
					I) 31	-0.19714	0.9708	165.8262
					30+31 32	-0.00107	0.9914	0.0047

STEP NUMBER   7
VARIABLE ENTERED   26

MULTIPLE R   0.2721
STD. ERROR OF EST.   0.2637

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	22.803	3.258	46.852
RESIDUAL	4101	285.133	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.27114)							
Q10 1	-0.04220	0.01707	6.1122		Q32 2	0.00522	0.9848	0.1119
Q16 10	0.15895	0.01480	115.3891		Q55 3	0.01828	0.6716	1.3698
3X4 17	0.03939	0.02340	2.8364		Q56 4	-0.04905	0.4955	9.874
5+6 18	0.05638	0.02288	6.0634		Q12 5	0.02700	0.8566	2.9918
8+9 19	0.24943	0.02122	138.1510		Q13 6	0.01351	0.8027	0.7486
18+26 24	0.02982	0.01154	6.6745		Q14 7	0.07006	0.9622	20.2219
21+24 26	-0.03196	0.01937	2.7219		Q15 8	0.00765	0.9943	0.2402
					Q17 9	-0.02680	0.8935	2.9474
					C23 11	-0.01695	0.7639	1.1785
					Q26 12	0.09437	0.6478	36.8412
					Q27 13	0.08748	0.6897	31.6218
					Q29 15	-0.15512	0.6231	101.0813
					2+7 16	0.03557	0.9836	5.1954
					49+58 20	0.06672	0.9480	17.2463
					61+62 21	0.02564	0.9198	2.6973
					14+15 22	0.04103	0.9920	6.9134
					14+17 23	0.02570	0.9764	2.7091
					20+27 25	0.01544	0.2710	0.9780
					22+25 27	-0.01378	0.4022	0.7783
					(E) 28	0.00932	0.8954	0.3563
					(P) 29	0.02993	0.9638	3.6762
					(F) 30	-0.00595	0.9675	0.1452
					(I) 31	-0.19914	0.9672	169.3015
					30+31 32	0.00194	0.9781	0.0154

Table 5-18.   (Continued)

```
STEP NUMBER    8
VARIABLE ENTERED   23

MULTIPLE R           0.2732
STD. ERROR OF EST.   0.2636

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   8        22.991          2.874        41.352
        RESIDUAL   4100       284.945         0.069
```

	VARIABLES IN EQUATION			.		VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.25260)			.				
Q10 1	-0.04239	0.01707	5.1733	.	Q32 2	0.00599	0.9840	0.1470
Q16 10	0.15855	0.01480	114.8172	.	Q55 3	0.01731	0.6706	1.2292
3X4 17	0.04925	0.02340	2.9534	.	Q56 4	-0.04967	0.4952	10.1361
5+6 18	0.05557	0.02289	5.8951	.	Q12 5	0.02665	0.8565	2.9141
8+9 19	0.24770	0.02124	135.3633	.	Q13 6	0.01333	0.8026	0.7290
14+17 23	0.03897	0.02367	2.7391	.	Q14 7	0.06979	0.5581	20.0647
18+26 24	0.03224	0.01163	7.6739	.	Q15 8	0.00504	0.9339	0.1042
21+24 26	-0.03245	0.01937	2.8077	.	Q17 9	-0.06979	0.3900	20.0645
				.	Q23 11	-0.01549	0.7613	0.9841
				.	Q26 12	0.09333	0.6464	36.0184
				.	Q27 13	0.08623	0.6876	30.7062
				.	Q29 15	-0.15511	0.6231	101.0542
				.	2+7 16	0.03386	0.9788	4.7059
				.	49+58 20	0.06360	0.9459	16.6481
				.	61+62 21	0.02637	0.9191	2.8520
				.	14+15 22	0.03355	0.8325	4.6192
				.	20+27 25	0.01611	0.2708	1.0645
				.	22+25 27	-0.01251	0.4012	0.6417
				.	(E) 28	0.00648	0.8944	0.2949
				.	(P) 29	0.03083	0.9627	3.9000
				.	(F) 30	-0.00657	0.9670	0.1767
				.	(I) 31	-0.21251	0.9060	193.8637
				.	30+31 32	0.00178	0.9780	0.0129

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	8+9	19	0.2013	0.0404	0.0404	172.9719	1
2	Q16	10	0.2615	0.0683	0.0279	123.0059	2
3	5+6	18	0.2650	0.0702	0.0019	8.4418	3
4	Q10	1	0.2675	0.0716	0.0013	5.8819	4
5	18+26	24	0.2699	0.0729	0.0013	5.7288	5
6	3X4	17	0.2711	0.0734	0.0006	2.5392	6
7	21+24	26	0.2721	0.0741	0.0006	2.7219	7
8	14+17	23	0.2732	0.0747	0.0006	2.7091	8

Table 5-19.   Field of Information

```
SUB-PROBLM    3
DEPENDENT VARIABLE
MAXIMUM NUMBER OF STEPS       64
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER    1
VARIABLE ENTERED    1

MULTIPLE R          0.5995
STD. ERROR OF EST.  0.2094

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   1        101.094        131.094     2304.449
        RESIDUAL    4107       180.169         0.044
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.24917)								
Q10 1	0.63062	0.01314	2304.4491		Q32	2	0.00176	0.9990	0.0127
					Q55	3	-0.09221	0.9730	35.2152
					Q56	4	0.19435	0.5028	161.1835
					Q12	5	-0.00347	0.9985	0.0494
					Q13	6	0.00174	1.0000	0.0124
					Q14	7	-0.02452	0.9994	2.4704
					Q15	8	0.00682	0.9996	0.1910
					Q17	9	0.00000	0.9999	0.0000
					Q16	10	-0.12548	0.9890	65.6894
					Q23	11	0.04933	0.9999	10.0178
					Q26	12	0.00786	0.9999	0.2534
					Q27	13	0.00258	0.9996	0.0274
					Q28	14	-0.18264	0.9915	141.6885
					2+7	16	0.00116	0.9998	0.0056
					3X4	17	0.02775	0.9964	3.1643
					5+6	18	-0.07790	0.9776	25.0679
					8+9	19	-0.07780	0.9679	25.0012
					49+58	20	-0.07550	0.9871	23.5363
					61+62	21	0.03426	0.9996	4.8251
					14+15	22	-0.00698	0.9992	0.2001
					14+17	23	-0.01632	0.9999	1.0936
					18+26	24	0.04367	0.9999	7.8456
					20+27	25	0.03913	0.9997	6.2967
					21+24	26	-0.00944	0.9997	0.3657
					22+25	27	0.00350	0.9993	0.0503
					(E)	28	-0.00637	0.9996	0.1668
					(P)	29	0.00098	0.9989	0.3312
					(F)	30	-0.07134	0.9940	21.0051
					(I)	31	0.01050	0.9978	0.4529
					30+31	32	0.00562	0.9987	0.1295

```
STEP NUMBER    2
VARIABLE ENTERED    10

MULTIPLE R          0.6079
STD. ERROR OF EST.  0.2078

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   2        103.931         51.965     1203.218
        RESIDUAL    4106       177.332         0.043
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.31198)								
Q10 1	0.61947	0.01311	2233.8657		Q32	2	0.00259	0.9990	0.0274
Q16 10	-0.09390	0.01159	65.6894		Q55	3	-0.08765	0.9712	31.7774
					Q56	4	0.19297	0.5025	158.7652
					Q12	5	0.00243	0.9963	0.0243
					Q13	6	0.00695	0.9983	0.1980
					Q14	7	-0.02168	0.9989	1.9310

Table 5-19.   (Continued)

•	Q15	8	0.00553	0.9995	0.1255
•	Q17	9	0.00188	0.9997	0.0146
•	Q23	11	0.04439	0.9981	8.1031
•	Q26	12	0.00808	0.9999	0.2681
•	Q27	13	0.00435	0.9994	0.0778
•	Q28	14	-0.16392	0.9591	113.3522
•	2+7	16	0.00050	0.9998	0.0010
•	3X4	17	0.02567	0.9961	2.7066
•	5+6	18	-0.07188	0.9748	21.3198
•	8+9	19	-0.36655	0.9589	18.2627
•	49+58	20	-0.06508	0.9793	17.4629
•	61+62	21	0.02932	0.9979	3.5330
•	14+15	22	-0.00657	0.9992	0.1772
•	14+17	23	-0.01292	0.9991	0.6852
•	18+26	24	0.03924	0.9985	6.3314
•	20+27	25	0.03759	0.9995	5.8093
•	21+24	26	-0.01020	0.9997	0.4273
•	22+25	27	0.00275	0.9993	0.0311
•	(E)	28	-0.00036	0.9973	0.0005
•	(P)	29	0.01103	0.9987	0.4999
•	(F)	30	-0.06675	0.9923	18.3696
•	(I)	31	0.01823	0.9942	1.3719
•	30+31	32	-0.00097	0.9959	0.0039

STEP NUMBER   3
VARIABLE ENTERED   18

MULTIPLE R   0.6106
STD. ERROR OF EST.   0.2973

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	104.847	34.949	813.222
RESIDUAL	4105	176.416	0.043	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.37433)			:				
Q10 1	0.61071	0.01321	2135.8697	:	Q32	2	0.00399	0.9986	0.0655
Q16 10	-0.09105	0.01157	61.8945	:	Q55	3	-0.08913	0.9709	32.8625
5+6 18	-0.08281	0.01793	21.3178	:	Q56	4	0.19076	0.5017	154.9826
				:	Q12	5	0.00623	0.9936	0.1593
				:	Q13	6	0.00997	0.9966	0.4077
				:	Q14	7	-0.01971	0.9981	1.5951
				:	Q15	8	0.00775	0.9986	0.2468
				:	Q17	9	0.00138	0.9997	0.0078
				:	Q23	11	0.05145	0.9894	10.8929
				:	Q26	12	0.01125	0.9980	0.5197
				:	Q27	13	0.00634	0.9987	0.1651
				:	Q28	14	-0.16204	0.9581	110.6688
				:	2+7	16	0.00713	0.9914	0.2086
				:	3X4	17	0.02720	0.9956	3.0390
				:	8+9	19	-0.06900	0.9580	19.6331
				:	49+58	20	-0.05555	0.9594	12.7036
				:	61+62	21	0.03636	0.9890	5.4315
				:	14+15	22	-0.00380	0.9977	0.0593
				:	14+17	23	-0.01201	0.9990	0.5917
				:	18+26	24	0.04339	0.9955	7.7401
				:	20+27	25	0.03989	0.9986	6.5411
				:	21+24	26	-0.00540	0.9952	0.1196
				:	22+25	27	0.00728	0.9954	0.2174
				:	(E)	28	0.01001	0.9771	0.4116
				:	(P)	29	0.01559	0.9948	0.9980
				:	(F)	30	-0.06232	0.9880	16.0005
				:	(I)	31	0.01708	0.9939	1.1980
				:	30+31	32	0.00192	0.9943	0.0152

Table 5-19. (Continued)

STEP NUMBER 4
VARIABLE ENTERED 19

MULTIPLE R   0.6130
STD. ERROR OF EST.   0.2062

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	105.647	26.422	617.593
RESIDUAL	4104	175.576	0.043	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.41018)							
Q10 1	0.60051	0.01338	2013.9893		Q32 2	-0.00195	0.9912	0.0156
Q16 10	-0.09602	0.01164	54.9630		Q55 3	-0.06162	0.6832	15.6377
5+6 18	-0.08520	0.01790	22.6935		Q56 4	0.18970	0.4976	146.5387
8+9 19	-0.07230	0.01627	19.5331		Q12 5	0.00131	0.9885	0.0070
					Q13 6	0.00133	0.9909	0.0073
					Q14 7	-0.01891	0.9979	1.4681
					Q15 8	0.00070	0.9993	5.1840
					Q17 9	0.00675	0.9937	0.1869
					Q23 11	0.04897	0.9637	5.8930
					Q26 12	0.00998	0.9517	0.4090
					Q27 13	0.00393	0.9974	0.0634
					Q28 14	-0.15264	0.9204	97.8825
					2+7 16	0.00858	0.9910	0.3021
					3+4 17	0.01443	0.9310	0.8753
					49+50 20	-0.06047	0.9551	15.0574
					61+62 21	0.02077	0.9344	1.7701
					14+15 22	-0.00424	0.9977	0.0737
					14+17 23	-0.00719	0.9940	0.2123
					18+26 24	0.03510	0.9798	5.0619
					20+27 25	0.03246	0.9861	4.3279
					21+24 26	-0.00919	0.9922	0.3469
					22+25 27	0.00051	0.9858	0.0011
					(E) 28	-0.00486	0.9324	0.0969
					(P) 29	0.00512	0.9716	0.1075
					(F) 30	-0.05314	0.9679	11.6176
					(I) 31	0.00939	0.9813	0.3617
					30+31 32	0.00085	0.9941	0.0030

STEP NUMBER 5
VARIABLE ENTERED 24

MULTIPLE R   0.6136
STD. ERROR OF EST.   0.2067

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	105.903	21.181	495.576
RESIDUAL	4103	175.360	0.043	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.39627)							
Q10 1	0.60383	0.01338	2017.9177		Q32 2	-0.00470	0.9852	0.0904
Q16 10	-0.08527	0.01160	54.3237		Q55 3	-0.05837	0.6760	14.0212
5+6 18	-0.08736	0.01792	23.7725		Q56 4	0.18620	0.4975	147.3214
8+9 19	-0.06746	0.01639	15.9462		Q12 5	-0.00660	0.9405	0.1785
18+26 24	0.01935	0.00860	5.0519		Q13 6	-0.00618	0.9377	0.1565
					Q14 7	-0.02576	0.9648	2.7230
					Q15 8	0.00839	0.9960	0.2888
					Q17 9	0.01872	0.8959	1.4375
					Q23 11	0.01820	0.7685	3.2652
					Q26 12	-0.01301	0.6480	0.7373
					Q27 13	-0.01865	0.6913	1.4276
					Q28 14	-0.15416	0.9271	99.8559
					2+7 16	0.00844	0.9909	0.2919
					3+4 17	0.01072	0.9456	0.4713
					49+50 20	-0.06212	0.9532	15.8891
					61+62 21	0.01672	0.9211	1.1469
					14+15 22	-0.00615	0.9948	0.1553
					14+17 23	-0.00264	0.9771	0.0285
					20+27 25	0.00491	0.2713	0.0990
					21+24 26	-0.02063	0.9038	1.7459
					22+25 27	-0.01271	0.8629	0.6630
					(E) 28	-0.01200	0.8964	0.5906
					(P) 29	0.00202	0.9640	0.0168
					(F) 30	-0.05364	0.9677	11.8369
					(I) 31	0.00848	0.9806	0.2952
					30+31 32	0.00228	0.9924	0.0213

Table 5-19.   (Continued)

STEP NUMBER   6
VARIABLE ENTERED   26

MULTIPLE R   0.6138
STD. ERROR OF EST.   0.2067

ANALYSIS OF VARIANCE
                  DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   6   105.978   17.663   413.346
     RESIDUAL   4102   175.285   0.043

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.40538)								
010 1	0.60059	0.01338	2015.2025		032	2	-0.00453	0.9852	0.0043
016 10	-0.06519	0.01160	53.9325		055	3	-0.05892	0.6756	14.2061
5+6 18	-0.08612	0.01794	23.0431		056	4	0.18634	0.4975	147.5255
8+9 19	-0.06784	0.01639	17.1336		012	5	-0.03501	0.9349	0.1028
13+25 24	0.02293	0.00981	5.4413		013	6	-0.00491	0.9341	0.0990
21+24 26	-0.02033	0.01516	1.7454		014	7	-0.02483	0.9627	2.5299
					015	8	0.00915	0.9947	0.3433
					017	9	0.01829	0.8955	1.3716
					023	11	0.02904	0.7642	3.6548
					026	12	-0.01303	0.6469	3.6969
					027	13	-0.01776	0.6899	1.2935
					028	14	-0.15474	0.9266	100.6029
					2+7	16	0.00812	0.9905	0.2702
					3X4	17	0.01109	0.9457	0.5001
					49+50 20		-0.06153	0.9523	15.5830
					61+62 21		0.01617	0.9205	1.0725
					14+15 22		-0.00508	0.9921	0.1060
					16+17 23		-0.00234	0.9769	0.0225
					20+27 25		0.00556	0.2718	0.1268
					22+25 27		0.00343	0.4030	0.0483
					(E)	28	-0.01265	0.8956	0.6565
					(P)	29	0.00197	0.9660	0.0159
					(F)	30	-0.05349	0.9677	11.7463
					(I)	31	0.00737	0.9777	0.2225
					30+31 32		0.00474	0.9787	0.0920

STEP NUMBER   7
VARIABLE ENTERED   17

MULTIPLE R   0.6139
STD. ERROR OF EST.   0.2067

ANALYSIS OF VARIANCE
                  DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   7   106.003   15.143   354.343
     RESIDUAL   4101   175.260   0.043

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.40369)								
010 1	0.60028	0.01338	2012.2119		032	2	-0.00475	0.9848	0.0924
016 10	-0.08521	0.01160	53.9472		055	3	-0.05818	0.6716	13.9261
3X4 17	0.01397	0.01834	3.5931		056	4	0.18598	0.4955	146.8888
5+6 18	-0.08620	0.01794	23.0934		012	5	-0.00882	0.8566	3.3192
8+9 19	-0.06566	0.01664	15.5759		013	6	-0.01011	0.8027	0.4194
18+26 24	0.02227	0.00905	5.3554		014	7	-0.02509	0.9622	2.5828
21+24 26	-0.02068	0.01519	1.8565		015	8	0.00938	0.9943	0.3639
					017	9	0.01887	0.8915	1.4606
					023	11	0.03006	0.7634	3.7076
					026	12	-0.01316	0.6478	0.7097
					027	13	-0.01797	0.6897	1.3250
					028	14	-0.15512	0.9259	101.0813
					2+7	16	0.00714	0.9836	0.2088
					49+50 20		-0.06087	0.9480	15.2454
					61+62 21		0.01587	0.9198	1.0358
					14+15 22		-0.00503	0.9920	0.1037
					16+17 23		-0.00208	0.9764	0.0177
					20+27 25		0.00567	0.2710	0.1317
					22+25 27		0.00289	0.4022	0.0343
					(E)	28	-0.01293	0.8954	0.6749
					(P)	29	0.00181	0.9638	0.0135
					(F)	30	-0.05336	0.9675	11.7084
					(I)	31	0.00617	0.9672	0.1561
					30+31 32		0.00444	0.9781	0.0807

Table 5-19.   (Continued)

STEP NUMBER   8
VARIABLE ENTERED   23

MULTIPLE R   0.6139
STD. ERROR OF EST.   0.2068

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	106.003	13.250	309.978
RESIDUAL	4100	175.260	0.043	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40486)			Q32 2	-0.00481	0.9840	0.0949
Q10 1	0.60029	0.01338	2011.7174	Q55 3	-0.05814	0.6706	13.9051
Q16 10	-0.08519	0.01160	53.8899	Q54 4	0.18607	0.4952	147.0112
3X4 17	0.01392	0.01835	0.5752	Q12 5	-0.00879	0.8565	0.3171
5+6 18	-0.08614	0.01795	23.0366	Q13 6	-0.01010	0.8026	0.4181
8+9 19	-0.06555	0.01666	15.4820	Q14 7	-0.03092	0.5681	3.9238
14+17 23	-0.00247	0.01857	0.0177	Q15 8	0.00964	0.9839	0.3813
18+26 24	0.02212	0.00912	5.8757	Q17 9	0.03092	0.3900	3.9237
21+24 26	-0.02065	0.01519	1.8479	Q23 11	0.03799	0.7613	3.6897
				Q26 12	-0.01307	0.6464	0.7008
				Q27 13	-0.01789	0.6876	1.314.8
				Q28 14	-0.15511	0.9253	101.0542
				2+7 16	0.00730	0.9788	0.2185
				49+58 20	-0.06084	0.9459	15.2266
				61+62 21	0.01582	0.9191	1.0259
				14+15 22	-0.00458	0.8325	0.0860
				20+27 25	0.00562	0.2708	0.1292
				22+25 27	0.00279	0.4012	0.0319
				(E) 28	-0.01277	0.8944	0.6683
				(P) 29	0.00174	0.9627	0.0125
				(F) 30	-0.05333	0.9670	11.6905
				(I) 31	0.00692	0.9060	0.1960
				30+31 32	0.00445	0.9780	0.0812

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDEN VARIABLES INCLUDED
1	Q10	1	0.5993	0.3594	0.3594	2304.4491	1
2	Q16	10	0.6079	0.3695	0.0101	65.6894	2
3	5+6	18	0.6105	0.3728	0.0033	21.3198	3
4	8+9	19	0.6133	0.3758	0.0030	19.6331	4
5	18+26	24	0.6135	0.3765	0.0008	5.0619	5
6	21+24	26	0.6139	0.3768	0.0003	1.7459	6
7	3X4	17	0.6139	0.3769	0.0001	0.5801	7
8	14+17	23	0.6139	0.3769	0.0000	0.0177	8

Table 5-20. Essentiality of Information to Task plus Extensiveness of Information Use in Task

SUB-PROBLM   9
DEPENDENT VARIABLE   (Q30-Q31)   Essentiality of Information to Task plus
MAXIMUM NUMBER OF STEPS   64   Extensiveness of Information Use in Task
F-LEVEL FOR INCLUSION   0.000000
F-LEVEL FOR DELETION   0.000000
TOLERANCE LEVEL   0.001000

STEP NUMBER   1
VARIABLE ENTERED   26

MULTIPLE R   0.1037
STD. ERROR OF EST. 0.2118

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	2.004	2.004	44.689
RESIDUAL	4107	184.194	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.75331)							
21+24 26	0.09871	0.01477	44.5830	Q10	1	-0.03516	0.9997	5.0829
				Q32	2	-0.03229	0.9987	4.2853
				Q55	3	-0.00331	0.9947	0.0450
				Q56	4	-0.03322	0.9999	4.5360
				Q12	5	0.00048	0.9791	0.0010
				Q13	6	-0.02954	0.9836	3.5868
				Q14	7	-0.09664	0.9902	38.7099
				Q15	8	-0.04266	0.9994	7.4849
				Q17	9	0.09749	0.9863	39.4017
				Q16	10	-0.04812	1.0000	9.5314
				Q23	11	-0.05579	0.9564	12.8216
				Q26	12	-0.06140	0.9625	15.5382
				Q27	13	-0.07401	0.9588	22.6163
				Q28	14	-0.00730	0.9997	0.2190
				Q29	15	-0.01578	0.9997	1.0222
				2+7	16	-0.02501	0.9999	2.5698
				3X4	17	0.01904	0.9909	1.4898
				5+6	18	0.03548	0.9953	5.1762
				8+9	19	-0.00940	0.9972	0.3631
				49+58	20	0.03462	0.9969	4.9272
				61+62	21	0.01580	0.9992	1.0248
				14+15	22	-0.08284	0.9952	28.3721
				14+17	23	0.01379	0.9992	0.7807
				18+26	24	-0.06946	0.9070	19.9066
				20+27	25	-0.07766	0.9245	24.9171
				22+25	27	-0.04811	0.4241	9.5258
				(E)	28	-0.02735	0.9976	3.0744
				(P)	29	0.01769	0.9987	1.2852
				(F)	30	0.00879	0.9999	0.3174
				(I)	31	-0.08452	0.9984	29.5448

STEP NUMBER   2
VARIABLE ENTERED   24

MULTIPLE R   0.1246
STD. ERROR OF EST. 0.2113

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	2.893	1.446	32.401
RESIDUAL	4106	183.305	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76754)							
18+26 24	-0.04076	0.00914	19.9056	Q10	1	-0.03436	0.9996	4.8525
21+24 26	0.11976	0.01547	59.9349	Q32	2	-0.02679	0.9921	2.9493
				Q55	3	-0.01315	0.9754	0.7101
				Q56	4	-0.03276	0.9999	4.4104
				Q12	5	0.01424	0.9424	0.8326
				Q13	6	-0.01643	0.9467	1.1081

Table 5-20. (Continued)

. Q14	7	-0.08701	0.9657	31.3176
. Q15	8	-0.04653	0.9966	8.9054
. Q17	9	0.08052	0.8971	26.7866
. Q16	10	-0.05101	0.9984	10.7109
. Q23	11	-0.02878	0.7795	3.4035
. Q26	12	-0.02671	0.6516	2.9303
. Q27	13	-0.04413	0.6926	8.0092
. Q28	14	-0.00630	0.9995	0.1630
. Q29	15	-0.01257	0.9975	0.6488
. 2+7	16	-0.02439	0.9998	2.4436
. 3X4	17	0.02709	0.9784	3.0151
. 5+6	18	0.03782	0.9943	5.8807
. 8+9	19	-0.01781	0.9832	1.3024
. 49+58	20	0.03748	0.9953	5.7752
. 61+62	21	0.02646	0.9772	2.8765
. 14+15	22	-0.08052	0.9939	26.7911
. 14+17	23	0.00440	0.9807	0.0794
. 20+27	25	-0.03568	0.2718	5.2337
. 22+25	27	-0.03425	0.4050	4.8218
. (E)	28	-0.01268	0.9511	5.6598
. (P)	29	0.02495	0.9883	2.5562
. (F)	30	0.00837	0.9999	0.2674
. (I)	31	-0.08126	0.9958	27.2863

STEP NUMBER 3
VARIABLE ENTERED 18

MULTIPLE R   0.1302
STD. ERROR OF EST.   0.2112

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	3.155	1.052	23.586
RESIDUAL	4105	183.043	0.045	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.73839)			.				
5+6 18	0.04386	0.01809	5.8837	.	Q10 1	-0.02906	0.9773	3.4681
18+26 24	-0.04147	0.00914	20.6130	.	Q32 2	-0.02719	0.9920	3.0356
21+24 26	0.11768	0.01548	57.7559	.	Q55 3	-0.01391	0.9750	0.7944
				.	Q56 4	-0.02796	0.9819	3.2104
				.	Q12 5	0.01254	0.9404	0.6458
				.	Q13 6	-0.01752	0.9459	1.2595
				.	Q14 7	-0.08790	0.9653	31.9596
				.	Q15 8	-0.04783	0.9955	9.4097
				.	Q17 9	0.08017	0.8970	26.5475
				.	Q16 10	-0.05383	0.9936	11.9251
				.	Q23 11	-0.03148	0.7758	4.0703
				.	Q26 12	-0.02723	0.6515	3.0457
				.	Q27 13	-0.04391	0.6926	7.9265
				.	Q28 14	-0.00845	0.9963	0.2932
				.	Q29 15	-0.00690	0.9744	0.1952
				.	2+7 16	-0.02804	0.9912	3.2296
				.	3X4 17	0.02711	0.9784	3.0195
				.	8+9 19	-0.01817	0.9831	1.3557
				.	49+58 20	0.03128	0.9709	4.2004
				.	61+62 21	0.02345	0.9706	2.2579
				.	14+15 22	-0.08203	0.9925	27.8041
				.	14+17 23	0.00355	0.9803	0.0518
				.	20+27 25	-0.03441	0.2715	4.8638
				.	22+25 27	-0.03481	0.4050	4.9789
				.	(E) 28	-0.01791	0.9341	1.3162
				.	(P) 29	0.02266	0.9845	2.1083
				.	(F) 30	0.00543	0.9938	0.1211
				.	(I) 31	-0.08059	0.9954	26.8260

Table 5-20. (Continued)

STEP NUMBER   4
VARIABLE ENTERED   1

MULTIPLE R   0.1333
STD. ERROR OF EST.   0.2111

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	3.310	0.827	18.567
RESIDUAL	4104	182.888	0.045	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.75834)			.					
Q10 1	-0.02494	0.01339	3.4591	.	Q32	2	-0.02626	0.9909	2.8303
5+6 18	0.03878	0.01829	4.4957	.	Q55	3	-0.01897	0.9485	1.4765
18+26 24	-0.04117	0.00913	23.3158	.	Q56	4	-0.01069	0.5019	0.4693
21+24 26	0.11735	0.01548	57.4655	.	Q12	5	0.01158	0.9393	0.5502
				.	Q13	6	-0.01725	0.9458	1.2207
				.	Q14	7	-0.08859	0.9648	32.4590
				.	Q15	8	-0.04826	0.9954	9.5767
				.	Q17	9	0.08055	0.8969	26.7957
				.	Q16	10	-0.05688	0.9845	13.3195
				.	Q23	11	-0.03091	0.7755	3.9237
				.	Q26	12	-0.02701	0.6515	2.9964
				.	Q27	13	-0.04338	0.6923	7.7356
				.	Q28	14	-0.01097	0.9891	0.4938
				.	Q29	15	0.01271	0.6350	0.6626
				.	2+7	16	-0.02808	0.9912	3.2373
				.	3X4	17	0.02897	0.9746	3.4466
				.	8+9	19	-0.02383	0.9509	2.3312
				.	49+58	20	0.02944	0.9627	3.5586
				.	61+62	21	0.02440	0.9696	2.4451
				.	14+15	22	-0.08272	0.9921	28.2708
				.	14+17	23	0.00340	0.9802	0.0474
				.	20+27	25	-0.03391	0.2714	4.7230
				.	22+25	27	-0.03548	0.4049	5.1717
				.	(E)	28	-0.01682	0.9327	1.1612
				.	(P)	29	0.02197	0.9839	1.9808
				.	(F)	30	0.00351	0.9894	0.0506
				.	(I)	31	-0.07945	0.9936	26.0643

STEP NUMBER   5
VARIABLE ENTERED   17

MULTIPLE R   0.1364
STD. ERROR OF EST.   0.2110

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	3.463	0.693	15.552
RESIDUAL	4103	182.735	0.045	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.75729)			.					
Q10 1	-0.02649	0.01341	3.8951	.	Q32	2	-0.02716	0.9930	3.0291
3X4 17	0.03424	0.01844	3.4456	.	Q55	3	-0.01462	0.9253	0.8774
5+6 18	0.03847	0.01828	4.4265	.	Q56	4	-0.01302	0.4988	0.6959
18+26 24	-0.04337	0.00919	21.9740	.	Q12	5	0.00330	0.8599	0.0447
21+24 26	0.11568	0.01550	55.6871	.	Q13	6	-0.03073	0.8066	3.8765
				.	Q14	7	-0.08906	0.9646	32.7927
				.	Q15	8	-0.04784	0.9951	9.4100
				.	Q17	9	0.08225	0.8943	27.9388
				.	Q16	10	-0.05650	0.9843	13.1382
				.	Q23	11	-0.03101	0.7755	3.9480
				.	Q26	12	-0.02696	0.6514	2.9827
				.	Q27	13	-0.04368	0.6923	7.8423
				.	Q28	14	-0.01075	0.9890	0.4742
				.	Q29	15	0.01201	0.6346	0.5919
				.	2+7	16	-0.03050	0.9849	3.8199
				.	8+9	19	-0.01913	0.9227	1.5017
				.	49+58	20	0.03115	0.9596	3.9846
				.	61+62	21	0.02262	0.9657	2.1007
				.	14+15	22	-0.08261	0.9920	28.1892
				.	14+17	23	0.00432	0.9792	0.0765
				.	20+27	25	-0.03370	0.2714	4.6643
				.	22+25	27	-0.03718	0.4035	5.6778
				.	(E)	28	-0.01820	0.9307	1.3595
				.	(P)	29	0.02092	0.9826	1.7959
				.	(F)	30	0.00456	0.9881	0.0852
				.	(I)	31	-0.08352	0.9795	28.8165

Table 5-20. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   19

MULTIPLE R   0.1377
STD. ERROR OF EST.   0.2110

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	3.530	0.588	13.212
RESIDUAL	4102	182.668	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76953)				Q32 2	-0.02859	0.9851	3.3543
Q10 1	-0.02936	0.01362	4.6478		Q55 3	-0.00541	0.6717	0.1200
3X4 17	0.03029	0.01872	2.6155		Q56 4	-0.01462	0.4956	0.8769
5+6 18	0.03809	0.01828	4.3393		Q12 5	0.00355	0.8598	0.0516
8+9 19	-0.02072	0.01691	1.5017		Q13 6	-0.03135	0.8058	4.0346
18+26 24	-0.04420	0.00923	22.9110		Q14 7	-0.08834	0.9629	32.2588
21+24 26	0.11555	0.01550	55.5587		Q15 8	-0.04834	0.9945	9.6074
					Q17 9	0.08289	0.8935	28.3700
					Q16 10	-0.05498	0.9759	12.4347
					Q23 11	-0.03356	0.7643	4.6230
					Q26 12	-0.02565	0.6481	2.6995
					Q27 13	-0.04282	0.6907	7.5316
					Q28 14	-0.00719	0.9520	0.2119
					Q29 15	0.01067	0.6313	0.4666
					2+7 16	-0.02987	0.9838	3.6625
					49+58 20	0.03001	0.9557	3.6961
					61+62 21	0.01893	0.9202	1.4695
					14+15 22	-0.08261	0.9920	28.1791
					14+17 23	0.00531	0.9767	0.1155
					20+27 25	-0.03384	0.2714	4.7014
					22+25 27	-0.03831	0.4022	6.0262
					(E) 28	-0.02206	0.8998	1.9970
					(P) 29	0.01851	0.9647	1.4054
					(F) 30	0.00736	0.9681	0.2219
					(I) 31	-0.08546	0.9725	30.1717

STEP NUMBER   7
VARIABLE ENTERED   15

MULTIPLE R   0.1381
STD. ERROR OF EST.   0.2110

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	3.551	0.507	11.390
RESIDUAL	4101	182.647	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76566)				Q32 2	-0.02852	0.9851	3.3376
Q10 1	-0.03594	0.01668	4.6424		Q55 3	-0.00482	0.6696	0.0952
Q29 15	0.01082	0.01584	0.4656		Q56 4	-0.01690	0.4784	1.1720
3X4 17	0.03014	0.01873	2.5993		Q12 5	0.00372	0.8596	0.0566
5+6 18	0.03910	0.01835	4.5429		Q13 6	-0.03117	0.8055	3.9884
8+9 19	-0.01989	0.01696	1.3751		Q14 7	-0.08809	0.9622	32.0608
18+26 24	-0.04446	0.00924	23.1434		Q15 8	-0.04846	0.9944	9.6528
21+24 26	0.11578	0.01551	55.7454		Q17 9	0.00271	0.8932	28.2378
					Q16 10	-0.05412	0.9632	12.0447
					Q23 11	-0.03392	0.7635	4.7231
					Q26 12	-0.02549	0.6479	2.6649
					Q27 13	-0.04259	0.6903	7.4512
					Q28 14	-0.00545	0.9242	0.1216
					2+7 16	-0.02996	0.9837	3.6846
					49+58 20	0.03084	0.9510	3.9028
					61+62 21	0.01874	0.9199	1.4402
					14+15 22	-0.08256	0.9920	28.1368
					14+17 23	0.00535	0.9767	0.1174
					20+27 25	-0.03386	0.2714	4.7052
					22+25 27	-0.03833	0.4022	6.0310
					(E) 28	-0.02185	0.8994	1.9578
					(P) 29	0.01853	0.9647	1.4079
					(F) 30	0.00796	0.9651	0.2600
					(I) 31	-0.08544	0.9725	30.1505

Table 5-20.   (Continued)

STEP NUMBER   8
VARIABLE ENTERED   14

MULTIPLE R   0.1382
STD. ERROR OF EST. 0.2111

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	3.556	0.445	9.979
RESIDUAL	4100	182.642	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76757)							
Q10 1	-0.03563	0.01671	4.5399		Q32 2	-0.02846	0.9850	3.2284
Q28 14	-0.00476	0.01251	0.1216		Q55 3	-0.00479	0.6696	0.0939
Q29 15	0.00986	0.01608	0.3752		Q56 4	-0.01701	0.4782	1.1868
3X4 17	0.03003	0.01874	2.6139		Q12 5	0.00390	0.8585	0.0625
5+6 18	0.03912	0.01836	4.5073		Q13 6	-0.03107	0.8052	3.9601
8+9 19	-0.01878	0.01725	1.1855		Q14 7	-0.08792	0.9575	31.9325
18+25 24	-0.04432	0.00925	22.9536		Q15 8	-0.04843	0.9943	9.6350
21+24 26	0.11552	0.01551	55.5334		Q17 9	0.08260	0.8927	28.1589
					Q16 10	-0.05391	0.9418	11.9488
					Q23 11	-0.03401	0.7633	4.7460
					Q26 12	-0.02508	0.6420	2.5802
					Q27 13	-0.04227	0.6847	7.3384
					2+7 16	-0.02979	0.9825	3.6414
					49+58 20	0.03128	0.9466	4.0141
					61+62 21	0.01888	0.9193	1.4621
					14+15 22	-0.08241	0.9904	28.0256
					14+17 23	0.00550	0.9759	0.1242
					20+27 25	-0.03375	0.2712	4.6734
					22+25 27	-0.03839	0.4022	6.0507
					(E) 28	-0.02176	0.8991	1.9410
					(P) 29	0.01873	0.9635	1.4382
					(F) 30	0.00790	0.9650	0.2559
					(I) 31	-0.08801	0.9386	31.9964

STEP NUMBER   9
VARIABLE ENTERED   23

MULTIPLE R   0.1383
STD. ERROR OF EST. 0.2111

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	3.562	0.396	8.882
RESIDUAL	4099	182.636	0.045	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76439)							
Q10 1	-0.03563	0.01671	4.5456		Q32 2	-0.02833	0.9842	3.2927
Q28 14	-0.00449	0.01252	0.1285		Q55 3	-0.00500	0.6686	0.1023
Q29 15	0.00986	0.01608	0.3758		Q56 4	-0.01715	0.4779	1.2061
3X4 17	0.03045	0.01874	2.6443		Q12 5	0.00383	0.8584	0.0601
5+6 18	0.03918	0.01836	4.5522		Q13 6	-0.03111	0.8051	3.9700
8+9 19	-0.01906	0.01727	1.2176		Q14 7	-0.11903	0.5652	58.8917
14+17 23	0.03668	0.01896	0.1242		Q15 9	-0.04925	0.9839	9.9637
18+26 24	-0.04390	0.00933	22.1464		Q17 9	0.11903	0.3879	56.8910
21+24 26	0.11553	0.01552	55.4256		Q16 10	-0.05399	0.9417	11.9781
					Q23 11	-0.03375	0.7608	4.6721
					Q26 12	-0.02534	0.6408	2.6338
					Q27 13	-0.04263	0.6828	7.4604
					2+7 16	-0.03025	0.9778	3.7524
					49+58 20	0.03106	0.9446	3.9563
					61+62 21	0.01905	0.9186	1.4875
					14+15 22	-0.09233	0.8317	35.2354
					20+27 25	-0.03362	0.2711	4.6364
					22+25 27	-0.03817	0.4012	5.9783
					(E) 28	-0.02195	0.8981	1.9758
					(P) 29	0.01893	0.9624	1.4689
					(F) 30	0.00777	0.9644	0.2474
					(I) 31	-0.09269	0.8741	35.5130

Table 5-20. (Continued)

```
STEP NUMBER    10
VARIABLE ENTERED    5

MULTIPLE R          0.1384
STD. ERROR OF EST.  0.2111

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION  10        3.564          0.356       7.998
        RESIDUAL    4098     182.633         0.045
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.76443)							
Q10 1	-0.03549	0.01672	4.5043		Q32 2	-0.02866	0.9796	3.3689
Q12 5	0.00396	0.01616	0.0601		Q55 3	-0.00480	0.6667	0.0942
Q28 14	-0.00459	0.01253	0.1343		Q56 4	-0.01724	0.4777	1.2179
Q29 15	0.00989	0.01608	0.3785		Q13 6	-0.04357	0.4775	7.7921
3X4 17	0.02939	0.01956	2.2588		Q14 7	-0.12355	0.5327	63.5038
5+6 18	0.03902	0.01838	4.5073		Q15 8	-0.04926	0.9839	9.9642
8+9 19	-0.01908	0.01727	1.2197		Q17 9	0.12354	0.3656	63.5031
14+17 23	0.00662	0.01896	0.1217		Q16 10	-0.05427	0.9389	12.1041
18+26 24	-0.04429	0.00946	21.9037		Q23 11	-0.03403	0.7581	4.7501
21+24 26	0.11528	0.01555	54.9435		Q26 12	-0.02575	0.6364	2.7179
					Q27 13	-0.04313	0.6775	7.6369
					2+7 16	-0.03016	0.9772	3.7300
					49+58 20	0.03082	0.9285	3.8954
					61+62 21	0.01883	0.9143	1.4535
					14+15 22	-0.09320	0.8231	35.9007
					20+27 25	-0.03364	0.2710	4.6428
					22+25 27	-0.03921	0.3919	6.3076
					(E) 28	-0.02231	0.8928	2.0405
					(P) 29	0.01865	0.9536	1.4253
					(F) 30	0.00767	0.9637	0.2409
					(I) 31	-0.09467	0.8496	37.0542

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	21+24	26	0.1037	0.0108	0.0108	44.6890	1
2	18+26	24	0.1245	0.0155	0.0048	19.9066	2
3	5+6	18	0.1302	0.0169	0.0014	5.8807	3
4	Q10	1	0.1333	0.0178	0.0008	3.4681	4
5	3X4	17	0.1364	0.0186	0.0008	3.4466	5
6	8+9	19	0.1377	0.0190	0.0004	1.5017	6
7	Q29	15	0.1381	0.0191	0.0001	0.4666	7
8	Q28	14	0.1382	0.0191	0.0000	0.1216	8
9	14+17	23	0.1383	0.0191	0.0000	0.1242	9
10	Q12	5	0.1384	0.0191	0.0000	0.0601	10

Table 5-21. Discovery of Information Available, but Unknown During Task

```
SUB-PROBLM   11
DEPENDENT VARIABLE
MAXIMUM NUMBER OF STEPS      64
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER   1
VARIABLE ENTERED   29

MULTIPLE R            0.1217
STD. ERROR OF EST.   0.4018

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION     1         9.964          9.964        61.718
     RESIDUAL    4107       663.022          0.161
```

```
          VARIABLES IN EQUATION          :        VARIABLES NOT IN EQUATION

VARIABLE  COEFFICIENT STD. ERROR F TO REMOVE : VARIABLE  PARTIAL CORR.  TOLERANCE  F TO ENTER

(CONSTANT   0.15906 )                        :
(P)  29     0.18454   0.02349    61.7178      : Q10   1    0.03565      0.9989      5.2260
                                             : Q55   3   -0.04011      0.9807      6.6167
                                             : Q56   4    0.01755      0.9980      1.2647
                                             : Q12   5    0.07664      0.9845     24.2609
                                             : Q13   6    0.06538      0.9831     17.6261
                                             : Q14   7    0.04622      0.9970      8.7902
                                             : Q15   8   -0.04548      0.9989      8.5111
                                             : Q17   9   -0.08731      0.9873     31.5425
                                             : Q16  10    0.00081      0.9996      0.0027
                                             : Q23  11    0.05375      0.9860     11.8963
                                             : Q26  12    0.03960      0.9965      6.4494
                                             : Q27  13    0.04123      0.9959      6.9925
                                             : Q28  14   -0.00955      0.9998      0.3747
                                             : Q29  15    0.02190      0.9998      1.9702
                                             : 2+7  16    0.01964      0.9996      1.5839


                                             : 3X4  17    0.03885      0.9975      6.2081
                                             : 5+6  18    0.00670      0.9955      0.1842
                                             : 8+9  19   -0.07353      0.9793     22.3211
                                             : 49+58 20  -0.00498      0.9821      0.1020
                                             : 61+62 21   0.10515      0.9784     45.9043
                                             : 14+15 22  -0.01284      1.0000      0.6776
                                             : 14+17 23  -0.03905      0.9971      6.2702
                                             : 18+26 24   0.07621      0.9884     23.9871
                                             : 20+27 25   0.08255      0.9916     28.1728
                                             : 21+24 26   0.03175      0.9987      4.1431
                                             : 27+25 27   0.07850      0.9921     25.4579
                                             : (E)   29    0.07676      0.9219     24.3382
                                             : (F)   30    0.00825      0.9995      0.2793
                                             : (I)   31    0.64983      0.9885   3001.2922
                                             : 30+31 32  -0.03120      0.9995      4.0021


STEP NUMBER   2
VARIABLE ENTERED   25

MULTIPLE R            0.1467
STD. RROR OF EST.    0.4005

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION     2        14.482          7.241        45.150
     RESIDUAL    4106       658.503          0.160
```

```
          VARIABLES IN EQUATION          :        VARIABLES NOT IN EQUATION

VARIABLE  COEFFICIENT STD. ERROR F TO REMOVE : VARIABLE  PARTIAL CORR.  TOLERANCE  F TO ENTER

(CONSTANT   0.15146 )                        :
20+27 2     0.09175   0.01729    28.1728      : Q10   1    0.03406      0.9985      4.7675
(P)  24     0.17307   0.02351    54.1837      : Q55   3   -0.02987      0.9646      3.6663
                                             : Q56   4    0.01668      0.9979      1.1430
                                             : Q12   5    0.06255      0.9502     16.1235
                                             : Q13   6    0.05138      0.9505     10.8650
                                             : Q14   7    0.03253      0.9671      4.3493
```

Table 5-21. (Continued)

.	Q15	8	-0.04272	0.9977	7.5070
.	Q17	9	-0.06563	0.8970	17.7575
.	Q16	10	0.00233	0.9993	0.0222
.	Q23	11	0.03247	0.8260	2.0741
.	Q26	12	-0.00344	0.7319	0.0484
.	Q27	13	-0.00076	0.6547	0.3153
.	Q28	14	-0.01074	0.9996	0.4739
.	Q29	15	0.01841	0.9989	1.3916
.	2+7	16	0.01863	0.9994	1.4250
.	3X4	17	0.03011	0.9856	3.7257
.	5+6	18	0.00503	0.9951	0.1038
.	8+9	19	-0.06559	0.9689	17.7389
.	49+58	20	-0.00780	0.9810	0.2498
.	61+62	21	0.09510	0.9602	37.4613
.	14+15	22	-0.01783	0.9965	1.3048
.	14+17	23	-0.02892	0.7811	3.4366
.	18+26	24	0.01128	0.2712	0.5228
.	21+24	26	0.00963	0.9244	0.3805
.	22+25	27	0.05432	0.8824	12.1487
.	(E)	28	0.06332	0.8928	16.5239
.	(F)	30	0.00871	0.9994	0.3115
.	(I)	31	0.64971	0.9875	2998.6383
.	30+31	32	-0.02737	0.9972	3.0779

STEP NUMBER   3
VARIABLE ENTERED   19

MULTIPLE R   0.1604
STD. ERROR OF EST.   0.3997

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	17.315	5.772	36.135
RESIDUAL	4105	655.670	0.160	

VARIABLES IN EQUATION   .   VARIABLES NOT IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.16535)			.				
8+9 19	-0.13163	0.03125	17.7399	.	Q10 1	0.02237	0.9644	2.0543
20+27 25	0.08422	0.01734	23.5827	.	Q55 3	0.00696	0.6789	3.1985
(P) 29	0.15964	0.02368	45.4426	.	Q56 4	0.00373	0.9585	0.0572
				.	Q12 5	0.06112	0.9496	15.3867
				.	Q13 6	0.04593	0.9432	8.6758
				.	Q14 7	0.03557	0.9652	5.2001
				.	Q15 8	-0.04430	0.9972	8.0694
				.	Q17 9	-0.06375	0.8961	16.7489
				.	Q16 10	0.01000	0.9859	0.4106
				.	Q23 11	0.01471	0.8140	0.8885
				.	Q26 12	-0.00033	0.7303	0.0004
				.	Q27 13	-0.00620	0.6537	0.1576
				.	Q28 14	0.00295	0.9565	0.0357
				.	Q29 15	0.00745	0.9695	0.2280
				.	2+7 16	0.01987	0.9991	1.6213
				.	3X4 17	0.01858	0.9533	1.4178
				.	5+6 18	0.00594	0.9949	0.1450
				.	49+58 20	-0.00899	0.9807	0.3318
				.	61+62 21	0.08326	0.9171	28.6511
				.	14+15 22	-0.01757	0.9965	1.2677
				.	14+17 23	-0.02551	0.9783	2.6719
				.	18+26 24	0.00786	0.2704	0.2533
				.	21+24 26	0.00827	0.9240	0.2808
				.	22+25 27	0.05116	0.8801	10.7690
				.	(E) 28	0.05341	0.8688	11.7385
				.	(F) 30	0.01950	0.9738	1.5615
				.	(I) 31	0.66780	0.9785	2967.5105
				.	30+31 32	-0.02855	0.9970	3.3475

Table 5-21. (Continued)

STEP NUMBER   4
VARIABLE ENTERED   28

MULTIPLE R   0.1688
STD. ERROR OF EST.   3.3991

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	19.185	4.796	30.107
RESIDUAL	4104	653.800	0.159	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.14668)							
8+9 19	-0.11387	0.03164	12.9518		Q10 1	0.02265	0.9644	2.1062
20+27 25	0.07443	0.01755	17.9834		Q55 3	0.02087	0.6372	1.7880
(E) 28	0.07379	0.02154	11.7385		Q56 4	0.00040	0.9548	0.0007
(P) 29	0.13882	0.02442	32.3245		Q12 5	0.05769	0.9452	13.7011
					Q13 6	0.04208	0.9379	7.2776
					Q14 7	0.03183	0.9601	4.1605
					Q15 8	-0.04961	0.9883	10.1241
					Q17 9	-0.06340	0.8960	16.5612
					Q16 10	0.00648	0.9816	0.1723
					Q23 11	0.00610	0.7924	0.1528
					Q26 12	-0.00237	0.7292	0.0231
					Q27 13	-0.00748	0.6534	0.2294
					Q28 14	0.00192	0.9562	0.0152
					Q29 15	0.00886	0.9689	0.3222
					2+7 16	0.02240	0.9970	2.0591
					3X4 17	0.01772	0.9530	1.2881
					5+6 18	-0.00096	0.9783	0.0038
					49+50 20	-0.02014	0.9412	1.6656
					61+62 21	0.07391	0.8777	22.5340
					14+15 22	-0.02369	0.9842	2.3032
					14+17 23	-0.02779	0.9766	3.1720
					18+26 24	0.00330	0.2684	0.0447
					21+24 26	0.00894	0.9238	0.3280
					22+25 27	0.04995	0.8796	10.2624
					(F) 30	0.01706	0.9717	1.1944
					(I) 31	0.64661	0.9743	2948.0742
					30+31 32	-0.02730	0.9964	3.0609

STEP NUMBER   5
VARIABLE ENTERED   27

MULTIPLE R   0.1759
STD. ERROR OF EST.   0.3987

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	20.816	4.163	26.192
RESIDUAL	4103	652.169	0.159	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.10086)							
8+9 19	-0.10918	0.03164	11.9093		Q10 1	0.02480	0.9627	2.5247
20+27 25	0.05549	0.01851	8.9907		Q55 3	0.02197	0.6370	1.9813
22+25 27	0.08993	0.02807	10.2624		Q56 4	0.00146	0.9544	0.0088
(E) 28	0.07212	0.02152	11.2313		Q12 5	0.04974	0.9160	10.1751
(P) 29	0.13515	0.02442	30.6382		Q13 6	0.03597	0.9222	5.3144
					Q14 7	0.02650	0.9483	2.8827
					Q15 8	-0.05083	0.9878	10.6243
					Q17 9	-0.05743	0.8807	13.5759
					Q16 10	0.00622	0.9816	0.1586
					Q23 11	-0.00104	0.7763	0.0045
					Q26 12	-0.00613	0.7251	0.1542
					Q27 13	-0.01061	0.6509	0.4615
					Q28 14	0.00306	0.9557	0.0384
					Q29 15	0.01069	0.9676	0.4690
					2+7 16	0.02193	0.9969	1.9732
					3X4 17	0.01381	0.9470	0.7825
					5+6 18	-0.00368	0.9754	0.0555
					49+50 20	-0.02304	0.9382	2.1793
					61+62 21	0.07245	0.8768	21.6436
					14+15 22	-0.02746	0.9789	3.0962
					14+17 23	-0.02665	0.9759	2.8722
					18+26 24	-0.00399	0.2628	0.0654
					21+24 26	-0.04134	0.4215	7.0230
					(F) 30	0.01667	0.9717	1.1406
					(I) 31	0.64559	0.9708	2931.3902
					30+31 32	-0.03068	0.9921	3.8638

Table 5-21. (Continued)

```
STEP NUMBER    6
VARIABLE ENTERED    6

MULTIPLE R            0.1794
STD. ERROR OF EST.   0.3985

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    6         21.660          3.610        22.736
     RESIDUAL    4102        651.325          0.159
```

	VARIABLES IN EQUATION			.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.09769)			.					
Q13 6	0.04086	0.01772	5.3164	.	Q10	1	0.02498	0.9627	2.5608
8+9 19	-0.10417	0.03170	10.8333	.	Q55	3	0.02500	0.6327	2.5641
20+27 25	0.05067	0.01861	7.4121	.	Q56	4	0.00002	0.9541	0.0028
22+25 27	0.08151	0.02830	8.2972	.	Q12	5	0.03457	0.5066	4.9081
(E) 28	0.06849	0.02157	10.0056	.	Q14	7	0.02206	0.9325	1.9959
(P) 29	0.13087	0.02447	29.5918	.	Q15	8	-0.04973	0.9868	10.1664
				.	Q17	9	-0.05379	0.8698	11.9022
				.	Q16	10	0.00451	0.9793	0.0835
				.	Q23	11	-0.63218	0.7755	0.0194
				.	Q26	12	-0.00841	0.7218	0.3037
				.	Q27	13	-0.01299	0.6481	0.6923
				.	Q28	14	0.00198	0.9548	0.0160
				.	Q29	15	0.01106	0.9675	0.5020
				.	2+7	16	0.02323	0.9956	2.2136
				.	3X4	17	0.00035	0.8139	0.0005
				.	5+6	18	-0.00425	0.9752	0.0740
				.	49+58	20	-0.02585	0.9329	2.7415
				.	61+62	21	0.07098	0.8751	20.7642
				.	14+15	22	-0.02889	0.9774	3.4261
				.	14+17	23	-0.02646	0.9759	2.8724
				.	18+26	24	-0.00696	0.2618	0.1945
				.	21+24	26	-0.04049	0.4213	6.7332
				.	(F)	30	0.01661	0.9716	1.1311
				.	(I)	31	0.66864	0.8747	3315.9106
				.	30+31	32	-0.03003	0.9918	3.7018

```
STEP NUMBER    7
VARIABLE ENTERED    22

MULTIPLE R            0.1816
STD. ERROR OF EST.   0.3984

ANALYSIS OF VARIANCE
                  DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION    7         22.204          3.172        19.989
     RESIDUAL    4101        650.781          0.159
```

	VARIABLES IN EQUATION			.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.11045)			.					
Q13 6	0.04212	0.01773	5.6439	.	Q10	1	0.02427	0.9621	2.4170
8+9 19	-0.10248	0.03170	10.4538	.	Q55	3	0.02620	0.6317	2.8170
14+15 22	-0.05032	0.02719	3.4251	.	Q56	4	0.00121	0.9539	0.0060
20+27 25	0.05105	0.01861	7.5255	.	Q12	5	0.03696	0.5035	5.6085
22+25 27	0.08507	0.02835	9.0026	.	Q14	7	0.05016	0.5846	10.3437
(E) 28	0.07277	0.02168	11.2536	.	Q15	8	-0.05016	0.2361	10.3437
(P) 29	0.12919	0.02448	27.8393	.	Q17	9	-0.05361	0.8697	11.8158
				.	Q16	10	0.00444	0.9793	0.0809
				.	Q23	11	-0.00030	0.7722	0.0004
				.	Q26	12	-0.00827	0.7217	0.2803
				.	Q27	13	-0.01236	0.6478	0.6265
				.	Q28	14	0.00318	0.9532	0.0414
				.	Q29	15	0.01053	0.9671	0.4546
				.	2+7	16	0.02473	0.9931	2.5098
				.	3X4	17	-0.00039	0.8134	0.0006
				.	5+6	18	-0.00359	0.9747	0.0528
				.	49+58	20	-0.02562	0.9328	2.6930
				.	61+62	21	0.07113	0.8751	20.8687
				.	14+17	23	-0.01619	0.8173	1.0750
				.	18+26	24	-0.00731	0.2610	0.2191
				.	21+24	26	-0.04036	0.4212	6.6910
				.	(F)	30	0.01590	0.9710	1.0368
				.	(I)	31	0.66883	0.8747	3318.5188
				.	30+31	32	-0.03229	0.9862	4.2799

Table 5-21.   (Continued)

```
STEP NUMBER    8
VARIABLE ENTERED    3

MULTIPLE R            0.1835
STD. ERROR OF EST.   0.3983

ANALYSIS OF VARIANCE
                   DF     SUM OF SQUARES   MEAN SQUARE    F RATIO
     REGRESSION     6        22.651          2.031        17.050
     RESIDUAL     4100       630.334         0.159
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.13019)			:				
Q55 3	0.05191	0.03093	2.0170	:	Q10 1	0.02649	0.9546	2.9225
Q13 6	0.04460	0.01779	5.2059	:	Q56 4	0.00402	0.9431	0.0662
8+9 19	-0.13499	0.03714	13.2079	:	Q12 5	0.03688	0.5035	5.5040
14+15 22	-0.05217	0.02720	3.6788	:	Q14 7	0.04801	0.5829	9.7095
20+27 25	0.05193	0.01861	7.7861	:	Q15 8	-0.04801	0.2354	9.7095
22+25 27	0.08572	0.02035	5.1415	:	Q17 9	-0.05381	0.0697	11.9024
(E) 28	0.08196	0.02236	13.4374	:	Q16 10	0.00397	0.9790	0.0641
(P) 29	0.12888	0.02440	27.7172	:	Q23 11	-0.00070	0.7720	0.0020
				:	Q26 12	-0.00814	0.7217	0.2714
				:	Q27 13	-0.01242	0.6678	0.6326
				:	Q28 14	0.00245	0.9524	0.0247
				:	Q29 15	0.01340	0.9562	0.7364
				:	2+7 16	0.02302	0.9910	2.3264
				:	3X4 17	0.00096	0.8112	0.0038
				:	5+6 18	-0.00500	0.9718	0.1032
				:	49+50 20	-0.02639	0.9307	2.9666
				:	61+62 21	0.07104	0.8745	21.2661
				:	14+17 23	-0.01717	0.8162	1.2090
				:	18+26 24	-0.00105	0.2610	0.2038
				:	21+24 26	-0.03969	0.4209	6.4670
				:	(F) 30	0.01442	0.9678	0.8523
				:	(1) 31	0.66888	0.8747	3318.6728
				:	30+31 32	-0.03205	0.9861	4.2160

```
STEP NUMBER    9
VARIABLE ENTERED   20

MULTIPLE R            0.1854
STD. ERROR OF EST.   0.3982

ANALYSIS OF VARIANCE
                   DF     SUM OF SQUARES   MEAN SQUARE    F RATIO
     REGRESSION     9        23.121          2.569        16.204
     RESIDUAL     4099       649.864         0.159
```

	VARIABLES IN EQUATION			:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11405)			:				
Q55 3	0.05442	0.03096	3.0936	:	Q10 1	0.02384	0.9427	2.3308
Q13 6	0.04732	0.01784	5.9456	:	Q56 4	0.00059	0.9277	0.0014
8+9 19	-0.13529	0.03713	13.2736	:	Q12 5	0.03840	0.5021	6.0524
49+50 20	-0.07198	0.04179	2.9656	:	Q14 7	0.04954	0.5925	10.0841
14+15 22	-0.05188	0.02720	3.6388	:	Q15 8	-0.04954	0.2353	10.0841
20+27 25	0.05108	0.01861	7.5334	:	Q17 9	-0.05273	0.0681	11.4260
22+25 27	0.08800	0.02037	9.6183	:	Q16 10	0.00632	0.9717	0.1636
(E) 28	0.08974	0.02281	15.4863	:	Q23 11	-0.00126	0.7717	0.0065
(P) 29	0.13170	0.02453	28.8288	:	Q26 12	-0.00702	0.7204	0.2019
				:	Q27 13	-0.01119	0.6464	0.5134
				:	Q28 14	0.00460	0.9464	0.0867
				:	Q29 15	0.01012	0.9412	0.4195
				:	2+7 16	0.02462	0.9909	2.4852
				:	3X4 17	-0.00203	0.8013	0.0169
				:	5+6 18	-0.00165	0.9566	0.0111
				:	61+62 21	0.07269	0.8738	21.7672
				:	14+17 23	-0.01586	0.8142	1.0305
				:	18+26 24	-0.00730	0.2610	0.2181
				:	21+24 26	-0.03942	0.4209	6.3767
				:	(F) 30	0.01467	0.9677	0.8818
				:	(1) 31	0.66864	0.8741	3313.6252
				:	30+31 32	-0.03091	0.9842	3.9193

Table 5-21. (Continued)

```
STEP NUMBER   10
VARIABLE ENTERED    1

MULTIPLE R          0.1868
STD. ERROR OF EST.  0.3981

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION  10       23.490         2.349        14.821
        RESIDUAL    4098    649.495         0.158
```

VARIABLES IN EQUATION				·	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	·	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08048)			·					
Q10 1	0.03926	0.02572	2.3338	·	Q56	4	-0.02185	0.4876	1.9570
Q55 3	0.05837	0.03106	3.5317	·	Q12	5	0.03937	0.5013	6.3617
Q13 6	0.04708	0.01784	5.9654	·	Q14	7	0.04930	0.5824	9.9818
8+9 19	-0.12874	0.03738	11.8634	·	Q15	8	-0.04930	0.2352	9.9818
49+58 20	-0.06479	0.04205	2.3749	·	Q17	9	-0.05315	0.8679	11.6071
14+15 22	-0.05100	0.02720	3.5168	·	Q16	10	0.00811	0.9664	0.2697
20+27 25	0.05077	0.01861	7.4337	·	Q23	11	-0.00105	0.7716	0.0045
22+25 27	0.08954	0.02839	9.9499	·	Q26	12	-0.00743	0.7202	0.2264
(E) 28	0.08973	0.02280	15.4855	·	Q27	13	-0.01189	0.6458	0.5794
(P) 29	0.13348	0.02455	29.5552	·	Q28	14	0.00568	0.9445	0.1320
				·	Q29	15	-0.00442	0.6289	0.0802
				·	2+7	16	0.02474	0.9909	2.5082
				·	3X4	17	-0.00246	0.8010	0.0248
				·	5+6	18	0.00148	0.9403	0.0089
				·	61+62	21	0.07304	0.8736	21.9760
				·	14+17	23	-0.01634	0.8139	1.0943
				·	18+26	24	-0.00684	0.2609	0.1915
				·	21+24	26	-0.03958	0.4209	6.4273
				·	(F)	30	0.01571	0.9659	1.0117
				·	(I)	31	0.66841	0.8729	3308.6154
				·	30+31	32	-0.03011	0.9830	3.7176

```
STEP NUMBER   11
VARIABLE ENTERED    4

MULTIPLE R          0.1881
STD. ERROR OF EST.  0.3981

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION  11       23.801         2.164        13.455
        RESIDUAL    4097    649.185         0.158
```

VARIABLES IN EQUATION				·	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	·	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.09257)			·					
Q10 1	0.07344	0.03547	4.2870	·	Q12	5	0.03975	0.5012	6.4823
Q55 3	0.05575	0.03111	3.2110	·	Q14	7	0.04932	0.5874	9.9880
Q56 4	-0.04918	0.03516	1.9570	·	Q15	8	-0.04932	0.2352	9.9880
Q13 6	0.04777	0.01784	7.1678	·	Q17	9	-0.05309	0.8679	11.5780
8+9 19	-0.13081	0.03740	12.2325	·	Q16	10	0.00779	0.9661	0.2483
49+58 20	-0.06894	0.04214	2.6755	·	Q23	11	-0.00118	0.7716	0.0057
14+15 22	-0.04925	0.02722	3.2725	·	Q26	12	-0.00777	0.7200	0.2475
20+27 25	0.04975	0.01862	7.1358	·	Q27	13	-0.01206	0.6458	0.5961
22+25 27	0.08979	0.02838	10.0070	·	Q28	14	0.00465	0.9425	0.0887
(E) 28	0.09224	0.02287	16.2673	·	Q29	15	-0.00037	0.6072	0.0006
(P) 29	0.13136	0.02460	28.5249	·	2+7	16	0.02503	0.9908	2.5685
				·	3X4	17	-0.00144	0.7993	0.0085
				·	5+6	18	0.00049	0.9384	0.0010
				·	61+62	21	0.07209	0.8716	21.3961
				·	14+17	23	-0.01628	0.8138	1.0857
				·	18+26	24	-0.00694	0.2609	0.1975
				·	21+24	26	-0.03969	0.4209	6.4614
				·	(F)	30	0.01438	0.9622	0.8471
				·	(I)	31	0.66837	0.8728	3307.0474
				·	30+31	32	-0.03025	0.9830	3.7526

Table 5-21. (Continued)

```
STEP NUMBER   12
VARIABLE ENTERED   30

MULTIPLE R            0.1886
STD. ERROR OF EST.    0.3981

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION     12         23.935          1.995       12.587
      RESIDUAL     4096        649.050          0.158
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08987)			.					
Q10 1	0.07305	0.03547	4.2413	.	Q12	5	0.03937	0.5006	6.3574
Q55 3	0.05432	0.03115	3.0413	.	Q14	7	0.04888	0.5818	9.8069
Q56 4	-0.04716	0.03522	1.7921	.	Q15	8	-0.04888	0.2350	9.806?
Q13 6	0.04762	0.01784	7.1236	.	Q17	9	-0.05344	0.8674	11.7292
8+9 19	-0.13446	0.03761	12.7831	.	Q16	10	0.00747	0.9657	0.2288
49+58 20	-0.06893	0.04215	2.6767	.	Q23	11	-0.00112	0.7716	0.0051
14+15 22	-0.04861	0.02723	3.1856	.	Q26	12	-0.00751	0.7198	0.2312
20+27 25	0.04974	0.01862	7.1323	.	Q27	13	-0.01178	0.6455	0.5685
22+25 27	0.08956	0.02839	9.9550	.	Q28	14	0.00473	0.9424	0.0914
(E) 28	0.09091	0.02292	15.7385	.	Q29	15	0.00029	0.6059	0.0003
(P) 29	0.13082	0.02460	28.2737	.	2+7	16	0.02451	0.9893	2.4614
F) 30	0.04367	0.04744	3.8471	.	3X4	17	-0.00132	0.7992	0.0072
				.	5+6	18	-0.00037	0.9351	0.0006
				.	61+62 21		0.07201	0.8715	21.3445
				.	14+17 23		-0.01683	0.8127	1.1609
				.	18+26 24		-0.00694	0.2609	0.1973
				.	21+24 26		-0.03989	0.4208	6.5275
				.	(I) 31		0.66832	0.0727	3305.3924
				.	30+31 32		-0.03039	0.9829	3.7850

```
STEP NUMBER   13
VARIABLE ENTERED   10

MULTIPLE R            0.1887
STD. ERROR OF EST.    0.3981

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION     13         23.971          1.844       11.634
      RESIDUAL     4095        649.014          0.158
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.08414)			.					
Q10 1	0.07380	0.03551	4.3190	.	Q12	5	0.03924	0.5006	6.3121
Q55 3	0.05424	0.03115	3.0339	.	Q14	7	0.04877	0.5816	9.7621
Q56 4	-0.04692	0.03523	1.7739	.	Q15	8	-0.04877	0.2349	9.7621
Q13 6	0.04726	0.01786	7.0015	.	Q17	9	-0.05353	0.8673	11.7667
Q16 10	0.01074	0.02246	0.2288	.	Q23	11	-0.00080	0.7702	0.0026
8+9 19	0.13606	0.03776	12.9814	.	Q26	12	-0.00749	0.7197	0.2295
49+58 20	-0.07048	0.04227	2.7734	.	Q27	13	-0.01190	0.6454	0.5798
14+15 22	0.04856	0.02724	3.1790	.	Q28	14	0.00358	0.9187	0.0526
20+27 25	0.04992	0.01863	7.1797	.	Q29	15	0.00112	0.5986	0.0051
22+25 27	0.08966	0.02839	9.9744	.	2+7	16	0.02455	0.9893	2.4680
(E) 28	0.09040	0.02294	15.5245	.	3X4	17	-0.00124	0.7991	0.0063
(P) 29	0.13077	0.02461	28.2662	.	5+6	18	-0.00063	0.9339	0.0016
(F) 30	0.04317	0.04746	3.8275	.	61+62 21		0.07239	0.8700	21.5657
				.	14+17 23		-0.01697	0.8124	1.1797
				.	18+26 24		-0.00654	0.2601	0.1752
				.	21+24 26		-0.03990	0.4208	6.5280
				.	(I) 31		0.66892	0.8701	3315.2532
				.	30+31 32		-0.03003	0.9801	3.6961

Table 5-21.   (Continued)

STEP NUMBER   14
VARIABLE ENTERED   17

MULTIPLE R   0.1887
STD. ERROR OF EST.   0.3982

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	14	23.972	1.712	10.801
RESIDUAL	4094	649.013	0.159	

VARIABLES IN EQUATION

VARIABLE		COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT		0.08456)		
Q10	1	0.07374	0.03552	4.3098
Q55	3	0.05413	0.03118	3.0136
Q56	4	-0.04679	0.03527	1.7599
Q13	6	0.04784	0.01930	5.1429
Q16	10	0.01072	0.02244	3.2279
3X4	17	-0.00305	0.03843	0.0053
8+9	19	-0.13637	0.03797	12.8992
49+58	20	-0.07083	0.04251	2.7752
14+15	22	-0.04861	0.02725	3.1833
20+27	25	0.04994	0.01863	7.1827
22+25	27	0.08975	0.02842	9.9751
(E)	28	0.09039	0.02295	15.5195
(P)	29	0.13075	0.02461	28.2241
(F)	30	0.04314	0.04747	3.8251

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q12	5	0.03938	0.4987	6.3586
Q14	7	0.04876	0.5814	9.7540
Q15	8	-0.04876	0.2349	9.7540
Q17	9	-0.05353	0.8673	11.7625
Q23	11	-0.00087	0.7697	0.0028
Q26	12	-0.00748	0.7197	0.2290
Q27	13	-0.01189	0.6453	0.5787
Q28	14	0.00363	0.9178	0.0538
Q29	15	0.00111	0.5986	0.0051
2+7	16	0.02484	0.9768	2.5274
5+6	18	-0.00061	0.9336	0.0015
61+62	21	0.07240	0.8699	21.5674
14+17	23	-0.01698	0.8124	1.1809
18+26	24	-0.00652	0.2599	0.1737
21+24	26	-0.03988	0.4206	6.5209
(I)	31	0.66918	0.8693	3319.1151
30+31	32	-0.03001	0.9786	3.6889

STEP NUMBER   15
VARIABLE ENTERED   18

MULTIPLE R   0.1887
STD. ERROR OF EST.   0.3982

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	15	23.972	1.598	10.079
RESIDUAL	4093	649.013	0.159	

VARIABLES IN EQUATION

VARIABLE		COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT		0.08548)		
Q10	1	0.07365	0.03560	4.2814
Q55	3	0.05417	0.03120	3.0141
Q56	4	-0.04685	0.03531	1.7638
Q13	6	0.04784	0.01930	5.1416
Q16	10	0.01075	0.02248	3.2289
3X4	17	-0.00302	0.03844	0.0062
5+6	18	-0.00137	0.03520	0.0015
8+9	19	-0.13640	0.03798	12.8957
49+58	20	-0.07065	0.04276	2.7333
14+15	22	-0.04859	0.02726	3.1783
20+27	25	0.04993	0.01864	7.1755
22+25	27	0.08980	0.02844	9.9673
(E)	28	0.09049	0.02308	15.3719
(P)	29	0.13076	0.02462	28.2154
(F)	30	0.04325	0.04755	3.8272

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q12	5	0.03940	0.4986	6.3638
Q14	7	0.04876	0.5813	9.7502
Q15	8	-0.04876	0.2348	9.7502
Q17	9	-0.05353	0.8672	11.7581
Q23	11	-0.00080	0.7672	0.0026
Q26	12	-0.00747	0.7194	0.2283
Q27	13	-0.01189	0.6453	0.5786
Q28	14	0.00364	0.9171	0.0543
Q29	15	0.00108	0.5969	0.0048
2+7	16	0.02501	0.9684	2.5603
61+62	21	0.07252	0.8678	21.6350
14+17	23	-0.01698	0.8124	1.1835
18+26	24	-0.00650	0.2596	0.1728
21+24	26	-0.03989	0.4200	6.5213
(I)	31	0.66977	0.8677	3328.9982
30+31	32	-0.03001	0.9773	3.6874

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	(P)	29	0.1217	0.0148	0.0148	61.7178	1
2	20+27	25	0.1467	0.0215	0.0067	28.1728	2
3	8+9	19	0.1604	0.0257	0.0042	17.7389	3
4	(E)	28	0.1689	0.0285	0.0028	11.7385	4
5	22+25	27	0.1759	0.0309	0.0024	10.2624	5
6	Q13	6	0.1794	0.0322	0.0013	5.3144	6
7	14+15	22	0.1815	0.0330	0.0008	3.4261	7
8	Q55	3	0.1835	0.0337	0.0007	2.8170	8
9	49+58	20	0.1854	0.0344	0.0007	2.9666	9
10	Q10	1	0.1869	0.0349	0.0005	2.3393	10
11	Q56	4	0.1881	0.0354	0.0005	1.9570	11
12	(F)	30	0.1885	0.0356	0.0002	0.8071	12
13	Q16	10	0.1887	0.0356	0.0001	0.2298	13
14	3X4	17	0.1887	0.0356	0.0000	0.0063	14
15	5+6	18	0.1887	0.0356	0.0000	0.0015	15

Table 5-22. Existence of Company TIC times Use of Company TIC

```
SUB-PROBLEM    1
DEPENDENT VARIABLE        .33635
MAXIMUM NUMBER OF STEPS      32
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER    1
VARIABLE ENTERED    3

MULTIPLE R        0.2762
STD. ERROR OF EST.    0.3479

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
    REGRESSION       1         14.560         14.560      120.263
    RESIDUAL      1456        176.271          0.121
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.83031)							
055 3	-0.39570	0.03608	120.2625		037 1	0.22101	0.9575	74.7183
					039 2	0.24219	0.9088	90.6619
					056 4	0.01888	0.9651	0.5188
					059 5	0.28351	0.9037	127.1730
					050A 6	0.16615	0.8520	41.3083
					050C 7	0.08322	0.9600	10.1458
					0 37+39 8	0.27524	0.9004	119.2625
					9	0.31941	0.9150	165.3133
					42+43 10	0.09178	0.9793	12.3598
					45+46 11	0.06774	0.9978	5.7069
					49+58 12	0.07563	0.9984	8.3702
					(F) 13	0.60346	0.8863	833.3043
					(P) 14	0.10222	0.9793	15.3632
					40+41 16	0.22949	0.9875	80.8055

```
STEP NUMBER    2
VARIABLE ENTERED    6

MULTIPLE R        0.3191
STD. ERROR OF EST.    0.3432

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
    REGRESSION       2         19.426          9.713       82.450
    RESIDUAL      1455        171.405          0.118
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.66837)							
055 3	-0.30036	0.03856	60.6705		037 1	0.20396	0.9409	63.1100
050A 6	0.23202	0.03610	41.3093		039 2	0.22210	0.8868	75.4440
					056 4	0.01739	0.9650	0.4397
					059 5	0.26412	0.8809	109.0187
					050C 7	0.00189	0.7285	0.0052
					0 37+39 8	0.25386	0.8736	100.1555
					9	0.29399	0.8701	137.4546
					42+43 10	0.07787	0.9710	8.8714
					45+46 11	0.05201	0.9827	3.9444
					49+58 12	0.03656	0.9385	1.9465
					(F) 13	0.58868	0.8378	771.9112
					(P) 14	0.08290	0.9434	10.0616
					40+41 16	0.21430	0.9737	69.9901

Table 5-22.   (Continued)

STEP NUMBER   3
VARIABLE ENTERED   12

MULTIPLE R   0.3209
STD. ERROR OF EST. 0.3431

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   3   19.655   6.552   55.651
        RESIDUAL   1454   171.175   0.118

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.65402)			.				
Q55 3	-0.30351	0.03861	61.7773	.	Q37 1	0.20261	0.9349	62.2019
Q50A 6	0.21929	0.03722	34.7174	.	Q39 2	0.21928	0.8691	73.3918
49+58 12	0.08163	0.05851	1.9465	.	Q56 4	0.02215	0.9459	0.7133
				.	Q59 5	0.26193	0.8541	107.0284
				.	Q50C 7	0.00421	0.725*	0.0257
				.	Q 37+39 8	0.25140	0.8583	98.0258
				.	38+44 9	0.29207	0.8642	135.5068
				.	42+43 10	0.07407	0.9570	8.0154
				.	45+46 11	0.05103	0.9319	3.7942
				.	(E) 13	0.59153	0.8142	782.0933
				.	(P) 14	0.09003	0.9559	9.3664
				.	40+41 16	0.21130	0.9463	67.9065

STEP NUMBER   4
VARIABLE ENTERED   4

MULTIPLE R   0.3216
STD. ERROR OF EST. 0.3431

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   4   19.739   4.95   41.909
        RESIDUAL   1453   171.091   0.118

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.63084)			.				
Q55 3	-0.29812	0.03914	58.0075	.	Q37 1	0.20248	0.9388	62.0729
Q56 4	0.03084	0.03651	0.7133	.	Q39 2	0.21858	0.8675	72.8549
Q50A 6	0.21830	0.03725	34.2451	.	Q59 5	0.26275	0.8535	107.6770
49+58 12	0.08787	0.05899	2.2194	.	Q50C 7	-0.00298	0.6525	0.0129
				.	Q 37+39 8	0.25080	0.8571	97.4617
				.	38+44 9	0.29152	0.8630	134.8535
				.	42+43 10	0.07556	0.9535	8.3381
				.	45+46 11	0.05208	0.9800	3.9484
				.	(E) 13	0.59130	0.8136	780.5805
				.	(P) 14	0.08172	0.9516	9.7627
				.	40+41 16	0.21166	0.9461	68.1024

STEP NUMBER   5
VARIABLE ENTERED   7

MULTIPLE R   0.3216
STD. ERROR OF EST. 0.3433

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   5   19.741   3.948   33.507
        RESIDUAL   1452   17.090   0.118

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.63078)			.				
Q55 3	-0.29786	0.03922	57.6665	.	Q37 1	0.20255	0.9386	62.0769
Q56 4	0.03223	0.03857	0.6999	.	Q39 2	0.21865	0.8673	72.8546
Q50A 6	0.22045	0.04307	26.1954	.	Q59 5	0.26274	0.8533	107.5935
Q50C 7	-0.00415	0.03660	0.0129	.	Q 37+39 8	0.25089	0.8568	97.4732
49+58 12	0.08770	0.05902	2.2384	.	38+44 9	0.29151	0.8628	134.7519
				.	42+43 10	0.07585	0.9505	8.3962
				.	45+46 11	0.05202	0.9795	3.9375
				.	(E) 13	0.59129	0.8136	780.0241
				.	(P) 14	0.08177	0.9514	9.7681
				.	40+41 16	0.21165	0.9457	68.0438

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

Table 5-22.   (Continued)

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q55	3	0.2762	0.0763	0.0763	120.2425	1
2	Q50A	6	0.3191	0.1018	0.0255	41.3083	2
3	49+58	12	0.3209	0.1030	0.0012	1.9465	3
4	Q56	4	0.3216	0.1034	0.0004	0.7133	4
5	Q50C	7	0.3216	0.1034	0.0000	0.0129	5

Table 5-23.   Effort Index

```
SUB-PROBLM    9
DEPENDENT VARIABLE         8
MAXIMUM NUMBER OF STEPS    32
F-LEVEL FOR INCLUSION      0.000000
F-LEVEL FOR DELETION       0.000000
TOLERANCE LEVEL            0.001000
```

```
STEP NUMBER     1
VARIABLE ENTERED    3

MULTIPLE R              0.3372
STD. ERROR OF EST.     0.2905

ANALYSIS OF VARIANCE
                    DF      SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    1          15.759         15.759      186.750
        RESIDUAL    1456         122.863          0.084
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.46795)							
O55 3	-0.41168	0.03012	186.7502		Q37 1	0.54731	0.9571	622.2365
					Q39 2	0.69027	0.9088	1324.2261
					Q56 4	0.00769	0.9651	0.0859
					Q59 5	0.39865	0.9037	274.9224
					Q50A 6	0.23396	0.8520	84.2539
					Q50C 7	0.10835	0.9600	17.2830
					Q 37+39 8	0.75528	0.9004	1932.2361
					38 +++ 9	0.62657	0.9150	940.4061
					42+43 10	0.24018	0.9793	89.0721
					45+46 11	0.14561	0.9928	31.5196
					49+58 12	0.21557	0.9984	70.9075
					(P) 14	0.24360	0.9793	91.7901
					33+35 15	0.60346	0.9237	833.3043
					40+41 16	0.73370	0.9875	1696.4848

```
STEP NUMBER     2
VARIABLE ENTERED    6

MULTIPLE R              0.4027
STD. ERROR OF EST.     0.2825

ANALYSIS OF VARIANCE
                    DF      SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    2          22.484         11.242      140.841
        RESIDUAL    1455         116.138          0.080
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.27758)							
O55 3	-0.29959	0.03174	89.0846		Q37 1	0.53621	0.9409	586.7704
Q50A 6	0.27273	0.02971	84.2539		Q39 2	0.68083	0.8868	1256.3181
					Q56 4	0.00539	0.9650	0.0422
					Q59 5	0.37662	0.8809	240.3348
					Q50C 7	-0.00772	0.7285	0.0868
					Q 37+39 8	0.74652	0.8736	1830.2946
					38 +++ 9	0.60620	0.8701	844.7516
					42+43 10	0.22582	0.9710	78.1301
					45+46 11	0.12621	0.9827	23.5341
					49+58 12	0.16793	0.9385	42.1913
					(P) 14	0.22175	0.9634	75.1944
					33+35 15	0.58888	0.8982	771.9112
					40+41 16	0.73132	0.9737	1671.7387

```
STEP NUMBER     3
VARIABLE ENTERED    12

MULTIPLE R              0.4311
STD. ERROR OF EST.     0.2786

ANALYSIS OF VARIANCE
                    DF      SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    3          25.759          8.586      110.616
        RESIDUAL    1454         112.863          0.078
```

Table 5-23. (Continued)

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.22333)						
Q55 3	-0.31149	0.03136	98.6887	Q37 1	0.53660	0.9389	587.5525
Q50A 6	0.22469	0.03022	55.2778	Q39 2	0.67331	0.8691	1204.9677
49+58 12	0.30860	0.04751	42.1913	Q56 4	0.02700	0.9499	1.0597
				Q59 5	0.35786	0.8543	213.4129
				Q50C 7	0.00292	0.7256	0.0174
				Q 37+59 8	0.74127	0.8583	1772.1240
				38+44 9	0.60301	0.8642	830.2169
				42+43 10	0.21014	0.9570	67.1274
				45+46 11	0.12325	0.9919	22.4134
				(P) 14	0.21069	0.9559	67.4967
				33+35 15	0.59153	0.8970	782.3933
				40+41 16	0.72353	0.9463	1596.3033

STEP NUMBER   4
VARIABLE ENTERED   4

MULTIPLE R   0.4318
STD. ERROR OF EST.   0.2786

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	25.841	6.460	83.230
RESIDUAL	1453	112.781	0.078	

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.20039)						
Q55 3	-0.30616	0.03179	92.8085	Q37 1	0.53658	0.9388	587.0919
Q56 4	0.03052	0.02965	1.0597	Q39 2	0.67301	0.8675	1202.2180
Q50A 6	0.22141	0.03025	54.5608	Q59 5	0.35894	0.8535	214.7328
49+58 12	0.31477	0.04789	43.2093	Q50C 7	-0.00596	0.6525	0.0516
				Q 37+59 8	0.74104	0.8571	1768.5647
				38+44 9	0.60264	0.8630	928.0532
				42+43 10	0.21223	0.9535	68.4881
				45+46 11	0.12461	0.9800	22.9025
				(P) 14	0.21306	0.9516	69.0499
				33+35 15	0.59130	0.8966	780.5805
				40+41 16	0.72421	0.9461	1601.5124

STEP NUMBER   5
VARIABLE ENTERED   7

MULTIPLE R   0.4318
STD. ERROR OF EST.   0.2787

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	25.845	5.169	66.551
RESIDUAL	1452	112.777	0.078	

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.20029)						
Q55 3	-0.30573	0.03185	92.1709	Q37 1	0.53675	0.9386	587.2112
Q56 4	0.03277	0.03127	1.0982	Q39 2	0.67319	0.8673	1202.5621
Q50A 6	0.22739	0.03497	42.7823	Q59 5	0.35889	0.8543	214.5260
Q50C 7	-0.00675	0.02972	0.0516	Q 37+59 8	0.74129	0.8568	1769.8959
49+58 12	0.31451	0.04792	43.0833	38+44 9	0.60763	0.8628	827.4547
				42+43 10	0.21291	0.9505	68.8974
				45+46 11	0.12451	0.9795	22.8491
				(P) 14	0.21317	0.9514	69.0761
				33+35 15	0.59129	0.8966	780.0241
				40+41 16	0.72424	0.9457	1600.7018

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q55	3	0.3372	0.1137	0.1137	186.7502	1
2	Q50A	6	0.4027	0.1622	0.0485	84.2539	2
3	49+58 12		0.4311	0.1858	0.5236	42.1913	3
4	Q56	4	0.4318	0.1864	0.0006	1.0597	4
5	Q50C	7	0.4318	0.1864	0.0000	0.0516	5

Table 5-24. Use of TAB

```
SUB-PROBLEM     4
DEPENDENT VARIABLE          237
MAXIMUM NUMBER OF STEPS      32
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER    1
VARIABLE ENTERED    9

MULTIPLE R              0.4502
STD. ERROR OF EST.      0.3262

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
       REGRESSION    1        39.373          39.373      370.104
       RESIDUAL   1456       154.893           0.106
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.02774)			.					
38+44 9	0.54288	0.02822	370.1043	.	039	2	0.30776	0.8926	152.2296
				.	055	3	-0.08885	0.9150	11.5773
				.	056	4	0.00687	0.9934	0.0687
				.	059	5	0.13943	0.8858	28.8453
				.	050A	6	0.06881	0.9053	6.9227
				.	050C	7	0.05184	0.9765	3.9214
				.	0 37+3	8	0.59682	0.8238	805.0165
				.	42+43	10	0.17378	0.9761	45.3093
				.	45+46	11	0.00340	0.9877	0.0169
				.	49+58	12	0.02395	0.9510	0.8350
				.	(E)	13	0.41215	0.5610	297.7357
				.	(P)	14	0.09954	0.9713	14.5619
				.	33+35	15	0.11662	0.8600	20.0597
				.	40+41	16	0.10454	0.9147	16.0757

```
STEP NUMBER    2
VARIABLE ENTERED    15

MULTIPLE R              0.4621
STD. ERROR OF EST.      0.3240

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
       REGRESSION    2        41.479          20.740      197.504
       RESIDUAL   1455       152.787           0.105
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03792)			.					
38+44 9	0.49222	0.03023	265.0706	.	039	2	0.29180	0.8538	135.3309
33+35 15	0.11329	0.02530	20.0597	.	055	3	-0.06857	0.9425	6.8681
				.	056	4	0.00196	0.9916	5.0055
				.	059	5	0.11466	0.8304	19.3699
				.	050A	6	0.05150	0.8830	3.8660
				.	050C	7	0.04258	0.9697	2.6411
				.	0 37+3	8	0.58947	0.7856	774.2555
				.	42+43	10	0.16658	0.9705	41.5009
				.	45+46	11	-0.00254	0.9851	0.0094
				.	49+58	12	0.02000	0.9798	0.5817
				.	(E)	13	0.42219	0.3830	315.3764
				.	(P)	14	0.09107	0.9650	12.1590
				.	40+41	16	0.08773	0.8916	11.2774

Table 5-24. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   16

MULTIPLE R   0.4686
STD. ERROR OF EST. 0.3229

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	42.655	14.218	136.359
RESIDUAL	1454	151.611	0.104	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.03429)				Q39 2	0.28016	0.8081	123.7594
39+44 9	0.46928	0.03089	230.7747		Q55 3	-0.06889	0.8825	6.9287
33+35 15	0.09968	0.02553	15.2456		Q56 4	0.00579	0.9998	0.0487
40+41 16	0.05646	0.01681	11.2774		Q59 5	0.09975	0.7984	14.6041
					Q50A 6	0.04788	0.8913	3.3384
					Q50C 7	0.04329	0.9697	2.7285
					Q 37+3 8	0.58701	0.7457	763.8871
					42+43 10	0.15787	0.9560	37.1391
					45+46 11	-0.01223	0.9734	0.2173
					49+58 12	0.00619	0.9552	0.0558
					(F) 13	0.58701	0.1389	763.8855
					(P) 14	0.07918	0.9436	9.1666

STEP NUMBER   4
VARIABLE ENTERED   3

MULTIPLE R   0.4725
STD. ERROR OF EST. 0.3223

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	43.375	10.844	104.418
RESIDUAL	1453	150.892	0.104	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.01436)				Q39 2	0.27249	0.7750	116.4582
Q55 3	-0.08164	0.03557	6.9287		Q56 4	-0.00577	0.9924	0.0484
39+44 9	0.45217	0.03151	205.9695		Q59 5	0.08786	0.7658	11.2949
33+35 15	0.08698	0.02593	11.2495		Q50A 6	0.02834	0.7908	1.1673
40+41 16	0.05649	0.01678	11.3352		Q50C 7	0.03329	0.9473	1.6111
					Q 37+3 8	0.58619	0.7173	760.1787
					42+43 10	0.15249	0.9485	34.5660
					45+46 11	-0.01553	0.9712	0.3503
					49+58 12	0.00665	0.9552	0.0641
					(F) 13	0.58619	0.1336	760.1769
					(P) 14	0.07357	0.9363	7.9027

STEP NUMBER   5
VARIABLE ENTERED   7

MULTIPLE R   0.4734
STD. ERROR OF EST. 0.3222

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	43.542	8.708	83.892
RESIDUAL	1452	150.724	0.104	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.00575)				Q39 2	0.27107	0.7719	115.0759
Q55 3	-0.08670	0.03598	5.8052		Q56 4	-0.01590	0.8846	0.3670
Q50C 7	0.03619	0.02851	1.6111		Q55 5	0.08758	0.7658	11.2162
9	0.44901	0.03160	201.9295		Q50A 6	0.01406	0.6144	0.2867
33+35 15	0.08519	0.02596	10.7649		Q 37+3 8	0.58559	0.7143	757.2391
40+41 16	0.05662	0.01677	11.3923		42+43 10	0.15097	0.9457	33.8444
					45+46 11	-0.01576	0.9712	0.3604
					49+58 12	0.00485	0.9524	0.0342
					(F) 13	0.58559	0.1331	757.2373
					(P) 14	0.07247	0.9351	7.6613

Table 5-24. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   4

MULTIPLE R   0.4736
STD. ERROR OF EST.   0.3223

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	43.580	7.263	69.941
RESIDUAL	1451	150.686	0.104	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.00664)			.				
055 3	-0.08951	0.03629	6.0839	.	039 2	0.27130	0.7718	115.2014
056 4	-0.02153	0.03554	0.3670	.	059 5	0.08680	0.7631	11.0007
050C 7	0.04131	0.02974	1.9289	.	050A 6	0.01171	0.9993	0.1989
38+44 9	0.44921	0.03161	202.0002	.	0 37+39 8	0.58572	0.7143	757.2407
33+35 15	0.08522	0.02597	10.7671	.	42+43 10	0.15017	0.9375	33.4514
40+41 16	0.05617	0.01673	11.1868	.	45+46 11	-0.01655	0.9689	0.3974
				.	49+50 12	0.00265	0.9337	0.0102
				.	(E) 13	0.58572	0.1331	757.2389
				.	(P) 14	0.07135	0.9277	7.4191

STEP NUMBER   7
VARIABLE ENTERED   6

MULTIPLE R   0.4737
STD. ERROR OF EST.   0.3223

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	43.601	6.229	59.944
RESIDUAL	1450	150.666	0.104	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.00131)			.				
055 3	-0.08469	0.03788	4.9998	.	039 2	0.27109	0.7692	114.9331
056 4	-0.01901	0.03599	0.2791	.	059 5	0.08618	0.7588	10.8413
050A 6	0.01803	0.04042	0.1989	.	0 37+39 8	0.58596	0.7123	757.6455
050C 7	0.03364	0.03437	0.9577	.	42+43 10	0.14996	0.9371	33.3349
38+44 9	0.44706	0.03198	195.4047	.	45+46 11	-0.01748	0.9635	0.4429
33+35 15	0.08429	0.02606	10.6607	.	49+50 12	0.00032	0.8964	0.0001
40+41 16	0.05580	0.01682	11.0049	.	(E) 13	0.58596	0.1327	757.6436
				.	(P) 14	0.07071	0.9232	7.2815

STEP NUMBER   8
VARIABLE ENTERED   12

MULTIPLE R   0.4737
STD. ERROR OF EST.   0.3225

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	43.601	5.450	52.415
RESIDUAL	1449	150.666	0.104	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.00147)			.				
055 3	-0.08472	0.03795	4.9844	.	039 2	0.27238	0.7617	116.0418
056 4	-0.01896	0.03622	0.2741	.	059 5	0.08685	0.7463	11.0063
050A 6	0.01793	0.04127	0.1887	.	0 37+39 8	0.58797	0.7074	765.0620
030C 7	0.03364	0.03439	0.9571	.	42+43 10	0.15053	0.9296	33.5732
38+44 9	0.44704	0.03203	194.8377	.	45+46 11	-0.01748	0.9635	0.4426
49+50 12	0.00068	0.05627	0.0001	.	(E) 13	0.58796	0.1318	765.0602
33+35 15	0.08424	0.02607	10.4534	.	(P) 14	0.07078	0.9204	7.2917
40+41 16	0.05577	0.01701	10.7461	.				

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

Table 5-24. (Continued)

Summary Table

STEP NUMBER	VARIABLE CARTESIAN ALTITUDE	VARIABLE N	VARIABLE VEL	INCREMENT IN VEL	FLIGHT PATH RANGE TO IMP.	NUMBER OF INTEGRATION INSTANCES INCLUDED
1	...					1
2						2
3						3
4						4
5						5
6						6
7						7
8						8

Table 5-25. Use of STAR plus Use of English Abstracts or Translations

```
SUB-PROBLM     3
DEPENDENT VARIABLE        b(Q50+Q44)
MAXIMUM NUMBER OF STEPS    32
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED    6
```

```
MULTIPLE R            0.3078
STD. ERROR OF EST.    0.2842
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	12.657	12.657	152.377
RESIDUAL	1156	126.936	0.083	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.03371)							
Q50A 6	0.34536	0.02798	152.3768		Q37 1	0.41761	0.9612	307.3521
					Q39 2	0.27138	0.9360	115.6781
					Q55 3	-0.19718	0.8520	58.0580
					Q56 4	0.05917	0.9934	5.1126
					Q59 5	0.28104	0.9331	124.7750
					Q50C 7	-0.00860	0.7285	0.1076
					Q 37+39 8	0.36695	0.9257	226.4117
					42+43 10	0.11851	0.9805	20.7265
					45+46 11	0.07680	0.9843	8.5330
					49+58 12	0.06867	0.9418	6.8930
					(E) 13	0.62427	0.8891	929.1015
					(P) 14	0.12429	0.9706	22.0294
					33+35 15	0.32174	0.9357	168.0122
					40+41 16	0.26104	0.9770	106.3994

```
STEP NUMBER    2
VARIABLE ENTERED    3
```

```
MULTIPLE R            0.3605
STD. ERROR OF EST.    0.7824
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	17.358	8.679	108.645
RESIDUAL	1455	116.234	0.080	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.17539)							
Q55 3	-0.24362	0.03175	58.8580		Q37 1	0.40103	0.9409	278.6485
Q50A 6	0.25763	0.02973	75.1160		Q39 2	0.23704	0.8968	66.5611
					Q56 4	0.02674	0.9650	1.0404
					Q59 5	0.24608	0.8809	93.7242
					Q50C 7	-0.00868	0.7285	0.1095
					Q 37+39 8	0.33617	0.8736	185.2546
					42+43 10	0.10153	0.9710	15.1447
					45+46 11	0.07028	0.9827	7.2180
					49+58 12	0.08193	0.9385	9.8260
					(E) 13	0.60620	0.8378	844.7516
					(P) 14	0.10995	0.9634	17.7933
					33+35 15	0.29389	0.8982	137.4546
					40+41 16	0.25488	0.9737	101.0228

Table 5-25.　(Continued)

STEP NUMBER　　3
VARIABLE ENTERED　12

MULTIPLE R　　　　　0.3685
STD. ERROR OF EST.　0.2818

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	18.139	6.046	76.143
RESIDUAL	1454	115.454	0.079	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.14891)							
Q55　　3	-0.24943	0.03171	61.8598		Q37　　1	0.39899	0.9389	275.1006
Q50A　6	0.23417	0.03057	58.6978		Q39　　2	0.22850	0.8691	80.0470
49+58 12	0.15063	0.04805	9.8260		Q56　　4	0.03741	0.9499	2.0365
					Q59　　5	0.23621	0.8543	85.8606
					Q50C　7	-0.00353	0.7256	0.0181
					Q 37+39 8	0.32933	0.8583	176.7657
					42+43 10	0.09267	0.9570	12.5871
					45+46 11	0.06822	0.9819	6.7941
					(F)　13	0.60301	0.8142	830.2169
					(P)　14	0.10345	0.9559	15.7188
					33+35 15	0.29207	0.8970	135.5068
					40+41 16	0.24543	0.9463	93.1324

STEP NUMBER　　4
VARIABLE ENTERED　4

MULTIPLE R　　　　　0.3701
STD. ERROR OF EST.　0.2817

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	18.300	4.575	57.658
RESIDUAL	1453	115.293	0.079	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.14676)							
Q55　　3	-0.24175	0.03213	56.7012		Q37　　1	0.39896	0.9388	274.8621
Q56　　4	0.04248	0.02997	2.0365		Q39　　2	0.22727	0.8675	79.0845
Q50A　6	0.23238	0.03058	57.7465		Q59　　5	0.23757	0.8535	86.8501
49+58 12	0.15927	0.04842			Q50C　7	-0.01625	0.6525	0.3836
					Q 37+39 8	0.32838	0.8571	175.4987
					42+43 10	0.09517	0.9535	13.2721
					45+46 11	0.06999	0.9800	7.1479
					(F)　13	0.60264	0.8136	828.0532
					(P)　14	0.10628	0.9516	16.5884
					33+35 15	0.29152	0.8966	134.9535
					40+41 16	0.24611	0.9461	93.6210

STEP NUMBER　　5
VARIABLE ENTERED　7

MULTIPLE R　　　　　0.3704
STD. ERROR OF EST.　0.2817

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	18.331	3.666	46.184
RESIDUAL	1452	115.262	0.079	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.11647)							
Q55　　3	-0.24078	0.03219	55.9353		Q37　　1	0.39932	0.9386	275.2611
Q56　　4	0.04899	0.03162	2.4012		Q39　　2	0.22757	0.8673	79.2520
Q50A　6	0.24336	0.03535	47.3871		Q59　　5	0.23735	0.8533	86.6219
Q50C　7	-0.01861	0.03004	0.3836		Q 37+39 8	0.32877	0.8568	175.8445
49+58 12	0.15855	0.04844	10.7125		42+43 10	0.09625	0.9505	13.5677
					45+46 11	0.06965	0.9785	7.0732
					(F)　13	0.60263	0.8136	827.4547
					(P)　14	0.10653	0.9514	16.6369
					33+35 15	0.29151	0.8966	134.7519
F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION					40+41 16	0.24588	0.9457	93.3676

Table 5-25. (Continued)

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q50A	6	0.3078	0.0947	0.0947	152.3768	1
2	Q55	9	0.3605	0.1299	0.0352	58.8590	2
3	49+5R	12	0.3685	0.1358	0.0058	9.8760	3
4	Q5A	4	0.3701	0.1370	0.0012	2.0365	4
5	Q50C	7	0.3704	0.1372	0.0002	0.3836	5

Table 5-26.   Use of DDC

```
SUB-PROBLM    5
DEPENDENT VARIABLE        Q39
MAXIMUM NUMBER OF STEPS    32
F-LEVEL FOR INCLUSION    0.006000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER    1
VARIABLE ENTERED     9

MULTIPLE R           0.3277
STD. ERROR OF EST.   0.8155

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION     1         116.477         116.477     175.151
     RESIDUAL    1456         968.257           0.665
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.05844)								
38+44 9	0.93375	0.07055	175.150R		Q37	1	0.30776	0.7973	152.2296
					Q55	3	-0.22839	0.9150	90.0711
					Q56	4	0.05712	0.9934	4.7635
					Q59	5	0.21796	0.8858	72.5661
					Q50A	6	0.16928	0.9053	42.9233
					Q50C	7	0.10334	0.9765	15.7073
					Q 37+39	8	0.94711	0.8238	12672.5734
					42+43	10	0.22721	0.9761	79.2036
					45+46	11	0.09160	0.9877	12.3120
					49+58	12	0.14161	0.9810	29.7742
					(E)	13	0.71251	0.5610	1500.3751
					(P)	14	0.19603	0.9713	58.1490
					33+35	15	0.20851	0.8600	66.1361
					40+41	16	0.25646	0.9147	102.4358

```
STEP NUMBER    2
VARIABLE ENTERED    16

MULTIPLE R           0.4075
STD. ERROR OF EST.   0.7885

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
     REGRESSION     2         180.162          90.081     144.894
     RESIDUAL    1455         904.573           0.622
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | -0.09002)								
38+44 9	0.72284	0.07133	102.6949		Q37	1	0.29227	0.7886	135.8062
40+41 16	0.41022	0.04053	102.4358		Q55	3	-0.22863	0.9142	80.1920
					Q56	4	0.06871	0.9921	6.8971
					Q59	5	0.16961	0.8400	43.0669
					Q50A	6	0.15754	0.9011	37.0038
					Q50C	7	0.10504	0.9764	16.2211
					Q 37+39	8	0.94347	0.7716	11780.9055
					42+43	10	0.20250	0.9598	62.1745
					45+46	11	0.06453	0.9745	6.0805
					49+58	12	0.10492	0.9553	16.1831
					(E)	13	0.80470	0.2532	2671.3463
					(P)	14	0.16259	0.9466	39.4807
					33+35	15	0.17584	0.8363	46.3925

Table 5-26. (Continued)

STEP NUMBER 3
VARIABLE ENTERED 3

MULTIPLE R   0.4579
STD. ERROR OF EST.   0.7679

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	227.444	75.815	128.584
RESIDUAL	1454	857.291	0.590	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.23968)			037 1	0.28101	0.7827	124.5712
055 3	-0.74580	0.08327	80.1920	056 4	0.03055	0.9626	1.3577
38+47 9	0.56674	0.07419	57.3532	059 5	0.12249	0.7937	22.1322
40+41 16	0.39958	0.03949	102.5439	050A 6	0.09084	0.8071	12.0591
				050C 7	0.07028	0.9501	7.2178
				0 37+39 8	0.94046	0.7335	11123.8213
				42+43 10	0.18510	0.9499	51.5461
				45+46 11	0.05404	0.9718	4.2560
				49+50 12	0.10881	0.9553	17.4080
				(E) 13	0.79267	0.2352	2456.2980
				(P) 14	0.14494	0.9378	31.1733
				33+35 15	0.13934	0.8093	28.7682

STEP NUMBER 4
VARIABLE ENTERED 15

MULTIPLE R   0.4744
STD. ERROR OF EST.   0.7606

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	244.088	61.022	105.472
RESIDUAL	1453	840.647	0.579	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.01528)			037 1	0.27249	0.7767	116.4582
055 3	-0.66195	0.08397	62.1482	056 4	0.02845	0.9624	1.1765
38+49 9	0.43736	0.07437	34.5895	059 5	0.09909	0.7658	14.3993
33+35 15	0.32829	0.06121	28.7682	050A 6	0.07873	0.7998	9.0564
40+41 16	0.36672	0.03960	85.7513	050C 7	0.06344	0.9473	5.8674
				0 37+39 8	0.93925	0.7173	10872.1572
				42+43 10	0.18169	0.9485	49.5670
				45+46 11	0.05124	0.9712	3.8228
				49+50 12	0.10838	0.9552	17.2575
				(E) 13	0.93925	0.1336	10872.1600
				(P) 14	0.14092	0.9363	29.4186

STEP NUMBER 5
VARIABLE ENTERED 12

MULTIPLE R   0.4839
STD. ERROR OF EST.   0.7564

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	253.962	50.792	88.773
RESIDUAL	1452	830.773	0.572	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.11761)			037 1	0.27338	0.7767	117.2065
055 3	-0.66414	0.08350	63.2582	056 4	0.04187	0.9488	2.5476
38+49 9	0.41324	0.07418	31.0337	059 5	0.08454	0.7492	10.4445
49+50 12	0.53116	0.12786	17.2575	050A 6	0.05696	0.7624	4.7233
33+35 15	0.32559	0.06087	28.6088	050C 7	0.05800	0.9445	4.8974
40+41 16	0.34064	0.03980	72.8585	0 37+39 8	0.93873	0.7111	10763.6989
				42+43 10	0.17216	0.9378	44.3221
				45+46 11	0.04914	0.9708	3.5120
				(E) 13	0.93873	0.1325	10763.6995
				(P) 14	0.13381	0.9308	26.4558

Table 5-26. (Continued)

```
STEP NUMBER     6
VARIABLE ENTERED    7

MULTIPLE R          0.4865
STD. ERROR OF EST.  0.7554

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   6        256.796        42.793       74.993
        RESIDUAL   1451        827.979         0.571
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.19610)			.	--		---	--- --- ---	
055 3	-0.63567	0.08438	56.7554	.	037	1	0.27208	0.7758	115.9192
050C 7	0.14915	0.06694	4.8974	.	056	4	0.02604	0.8672	0.9841
38+49 9	0.40101	0.07429	29.1403	.	059	5	0.38457	0.7692	10.4458
49+58 12	0.51584	0.12788	16.2721	.	050A	6	0.03317	0.5853	1.5970
33+35 15	0.31835	0.06098	27.3458	.	0 37+39 8		0.93851	0.7086	10715.3535
40+41 16	0.34176	0.03984	73.5952	.	42+43 10		0.16979	0.5355	43.0446
				.	45+46 11		0.04891	0.9707	3.4770
				.	(F)	13	0.93851	0.1320	10715.3511
				.	(P)	14	0.13227	0.9299	25.8183

```
STEP NUMBER     7
VARIABLE ENTERED    6

MULTIPLE R          0.4874
STD. ERROR OF EST.  0.7552

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   7        257.667        36.810       64.534
        RESIDUAL   1450        827.068         0.570
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.23136)			.					
055 3	-0.60514	0.08775	47.5579	.	037	1	0.27181	0.7757	115.5928
050A 6	0.12110	0.09583	1.5970	.	056	4	0.03065	0.8524	1.3629
050C 7	0.10163	0.07639	1.7761	.	059	5	0.08258	0.7471	10.0474
9	0.38826	0.07495	26.8315	.	0 37+39 8		0.93845	0.7077	10695.2299
49+58 12	0.47986	0.13098	13.4215	.	42+43 10		0.16946	0.5354	42.8398
33+35 15	0.31227	0.06106	26.1578	.	45+46 11		0.04647	0.9647	3.1358
40+41 16	0.34068	0.03984	73.1275	.	(F)	13	0.93845	0.1318	10695.2290
				.	(P)	14	0.13039	0.9256	25.0613

```
STEP NUMBER     8
VARIABLE ENTERED    4

MULTIPLE R          0.4881
STD. ERROR OF EST.  0.7551

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   8        258.444        32.306       56.652
        RESIDUAL   1449        826.290         0.570
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.29765)			.					
055 3	-0.58870	0.08886	43.8882	.	037	1	0.27238	0.7756	116.0418
056 4	0.09903	0.08483	1.3629	.	059	5	0.08407	0.7463	10.3081
050A 6	0.13584	0.09664	1.9755	.	C 37+39 8		0.93845	0.7074	10688.9758
050C 7	0.07179	0.08055	0.7946	.	42+43 10		0.17247	0.5296	44.3942
9	0.38496	0.07500	26.3315	.	45+46 11		0.04764	0.9635	3.2931
49+58 12	0.49679	0.13177	14.2144	.	(E)	13	0.93845	0.1318	10688.9745
33+35 15	0.31132	0.06105	26.0019	.	(P)	14	0.13299	0.9209	26.0705
40+41 16	0.34154	0.03984	73.4934	.					

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION
```

Table 5-26. (Continued)

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	38 ~~	9	0.3277	0.1074	0.1074	175.1508	1
2	4043	16	0.4075	0.1561	0.0587	102.4358	2
3	055	3	0.4579	0.2097	0.6436	80.1420	3
4	3935	15	0.4744	0.2250	0.0153	28.7682	4
5	4958	12	0.4839	0.2341	0.0091	17.2575	5
6	050C	7	0.4865	0.2367	0.0026	4.8974	6
7	0904	6	0.4874	0.2375	0.0008	1.5970	7
8	354	4	0.4881	0.2383	0.0007	1.3629	8

Table 5-27. Use of DOD Specialized Information Centers plus Use of Other Specialized Information Centers

```
SUB-PROBLM    2
DEPENDENT VARIABLE       3(Q40-Q41)
MAXIMUM NUMBER OF STEPS     32
F-LEVEL FOR INCLUSION    C.000090
F-LEVEL FOR DELETION     0.000300
TOLERANCE LEVEL          0.001030


STEP NUMBER    1
VARIABLE ENTERED    12

MULTIPLE R         0.1937
STD. ERROR OF EST.    0.5230

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION     1         15.517          15.517       56.732
      RESIDUAL    1456        398.233           0.274
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.01128)							
Q965R 12	0.65076	0.08640	56.7316		Q37 1	0.20936	0.5931	66.6981
					Q39 2	0.30354	0.9684	147.6666
					Q55 3	-0.1061*	0.9994	16.5956
					Q56 4	0.01072	0.9981	0.1673
					Q59 5	0.27421	0.9569	118.2956
					Q50A 6	0.11005	0.9418	17.8370
					Q50C 7	0.03810	0.9946	2.1147
					Q 37+39 8	0.31829	0.9703	164.0201
					Q 38+44 9	0.27320	0.9830	117.3564
					42+43 10	0.14371	0.9796	30.6860
					45+46 11	0.13437	0.9970	26.7547
					(E) 13	0.71227	0.9532	1498.3021
					(P) 14	0.18109	0.9854	49.3320
					33+35 15	0.23921	0.9930	88.3143

```
STEP NUMBER    2
VARIABLE ENTERED    6

MULTIPLE R         0.2217
STD. ERROR OF EST.    0.5200

ANALYSIS OF VARIANCE
                    DF     SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION     2         20.360          10.170       37.612
      RESIDUAL    1455        393.410           0.270
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.08229)							
Q50A 6	0.21968	0.05202	17.8470		Q37 1	0.19365	0.9598	56.6487
Q965R 12	0.56053	0.08852	40.0073		Q39 2	0.28809	0.9215	131.6025
					Q55 3	-0.06943	0.9491	7.0436
					Q56 4	-0.00154	0.9758	0.0036
					Q59 5	0.25786	0.9107	103.5679
					Q50C 7	-0.02254	0.9756	0.7392
					Q 37+39 8	0.30244	0.9136	146.3927
					Q .. 9	0.26382	0.901C	100.1202
					42+43 10	0.13378	0.9679	26.2940
					45+46 11	0.12323	0.9837	22.4209
					(E) 13	0.71598	0.8694	1529.3013
					(P) 14	0.16767	0.9639	42.0599
					33+35 15	0.22047	0.9351	74.2850

Table 5-27.   (Continued)

STEP NUMBER   3
VARIABLE ENTERED   3

MULTIPLE R   0.2318
STD. ERROR OF EST. 0.5189

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	22.236	7.412	27.527
RESIDUAL	1456	391.513	0.269	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.05912)							
055 3	-0.15499	0.05860	7.0636		037 1	0.18589	0.9389	51.9971
05PA 6	0.16192	0.05629	8.2760		039 2	0.28028	0.8691	123.8740
4PA5P 12	0.57625	0.08849	42.1146		056 4	-0.01310	0.8499	0.2496
					059 5	0.24900	0.8543	94.0413
					050C 7	-0.02231	0.7256	0.7233
					0 37+39 8	0.29512	0.8583	138.6282
					0 38+49 9	0.24543	0.8662	93.1324
					42043 10	0.12693	0.9570	23.7914
					45046 11	0.12072	0.9819	21.4871
					(F) 13	0.72353	0.8142	1596.3032
					(P) 14	0.16242	0.9550	39.3681
					33+35 15	0.21130	0.8970	67.9065

STEP NUMBER   4
VARIABLE ENTERED   7

MULTIPLE R   0.2328
STD. ERROR OF EST. 0.5190

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	22.471	5.618	20.822
RESIDUAL	1455	391.318	0.269	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.05943)							
055 3	-0.15479	0.05863	7.0233		037 1	0.18825	0.9386	52.2344
05PA 6	0.18888	0.06460	8.5453		039 2	0.28108	0.8684	124.5593
050C 7	-0.04643	0.05267	0.7723		056 4	-0.00636	0.8542	0.0586
4PA5P 12	0.56949	0.08967	41.2467		059 5	0.24857	0.8537	95.6201
					0 37+39 8	0.29597	0.8576	139.4071
					0 38+49 9	0.24541	0.8662	93.2553
					42043 10	0.12773	0.9550	24.1052
					45046 11	0.12003	0.9807	21.2255
					(F) 13	0.72378	0.8142	1597.5042
					(P) 14	0.16228	0.9558	39.2768
					33+35 15	0.21145	0.8970	67.9546

STEP NUMBER   5
VARIABLE ENTERED   6

MULTIPLE R   0.2329
STD. ERROR OF EST. 0.5191

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	22.447	4.489	16.659
RESIDUAL	1455	391.303	0.269	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.02521)							
055 3	-0.15727	0.05932	7.0292		037 1	0.18637	0.9386	52.2132
056 4	-0.01411	0.05825	0.0596		039 2	0.28149	0.8573	124.9708
05PA 6	0.18690	0.06491	8.2339		059 5	0.24469	0.8533	95.4930
050C 7	-0.04037	0.05535	0.5320		0 37+39 8	0.29631	0.8568	139.4564
4PA5P 12	0.56719	0.08925	40.3706		0 38+49 9	0.24588	0.8628	93.3676
					42043 10	0.12768	0.9505	24.0449
					45046 11	0.11989	0.9795	21.1585
					(F) 13	0.72474	0.8136	1600.7017
					(P) 14	0.14223	0.9514	39.7216
					33+35 15	0.21165	0.8966	68.0638

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

Table 5-27. (Continued)

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	49958	12.	0.1937	0.0375	0.0375	56.7316	1
2	0528	6	0.2217	0.0492	0.0117	17.6370	2
3	055	3	0.2318	0.0537	0.0046	7.0436	3
4	0500	7	0.2328	0.0542	0.0005	0.7763	4
5	056	5	0.2329	0.0543	0.0000	0.0540	5

Table 5-28.   Encounter of Restrictions times Nature of Restrictions

```
SUB-PROBLEM     3
DEPENDENT VARIABLE          4(BAL)
MAXIMUM NUMBER OF STEPS     17
F-LEVEL FOR INCLUSION       2.00000
F-LEVEL FOR DELETION        0.00000
TOLERANCE LEVEL             0.00100
```

```
STEP NUMBER     1
VARIABLE ENTERED      6
```

```
MULTIPLE R          0.2891
STD. ERROR OF EST.  0.2891
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	10.819	10.819	132.969
RESIDUAL	1494	119.471	0.081	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.17270)				037 1	0.03999	0.5475	2.3294
0 37678 6	0.16197	0.01403	132.9689		039 2	-0.03998	0.5991	2.3294
					055 3	-0.05739	0.9004	4.8918
					356 4	-0.07058	0.4936	7.2850
					059 5	0.09365	0.8851	12.8100
					050A 6	0.06590	0.9257	6.5473
					050C 7	0.05169	0.9750	3.8976
					035444 8	0.03817	0.8238	2.1229
					45846 11	0.12574	0.9662	23.3751
					49858 12	0.09850	0.9703	14.2542
					(E) 13	0.07749	0.3498	8.7803
					(P) 14	0.64683	0.9390	1046.6597
					33035 15	0.03241	0.8856	1.5304
					40841 16	0.07618	0.8837	8.4936

```
STEP NUMBER     2
VARIABLE ENTERED     12
```

```
MULTIPLE R          0.3043
STD. ERROR OF EST.  0.2860
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	11.969	5.956	74.217
RESIDUAL	1455	117.372	0.081	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.17618)				037 1	0.04468	0.5464	2.9080
0 37678 6	0.15258	0.01419	115.7992		039 2	-0.04468	0.5979	2.9081
49658 12	0.17981	0.04762	14.2542		055 3	-0.05945	0.9007	5.1916
					356 4	-0.05902	0.4781	5.0819
					059 5	0.07900	0.8671	9.1303
					050A 6	0.04693	0.9268	3.2079
					050C 7	0.04729	0.9727	3.2556
					035444 9	0.03121	0.8194	1.4176
					45846 11	0.12290	0.9550	22.3003
					(E) 13	0.06929	0.3930	6.2244
					(P) 14	0.64406	0.9316	1030.6709
					33035 15	0.02946	0.8890	1.2976
					40841 16	0.06281	0.8650	5.7585

Table 5-28. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   14

MULTIPLE R   0.3101
STD. ERROR OF EST.   0.2835

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	12.432	4.144	51.559
RESIDUAL	1454	116.959	0.080	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.12344							
0 37+30 8	0.16119	0.01494	99.3491		037 1	0.04513	0.5464	2.9659
49+58 12	0.16301	0.04906	11.5944		039 2	-0.04513	0.0979	2.9659
40+41 16	0.03596	0.01490	5.7585		055 3	-0.05932	0.9001	5.1312
					056 4	-0.05773	0.9776	4.8580
					059 5	0.06827	0.8298	6.8035
					050A 6	0.04478	0.8856	2.9195
					050C 7	0.04798	0.9727	3.3533
					038 9	0.02111	0.7047	0.6475
					45+46 11	0.11716	0.9740	20.2216
					(F) 13	0.02631	0.1525	1.0062
					(P) 14	0.64237	0.9192	1020.7663
					33+35 15	0.02071	0.8650	0.6237

STEP NUMBER   4
VARIABLE ENTERED   3

MULTIPLE R   0.3152
STD. ERROR OF EST.   0.2831

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	12.843	3.211	40.067
RESIDUAL	1453	116.448	0.080	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.15192							
055 3	-0.07009	0.03094	5.1312		037 1	0.04569	0.5463	3.0375
0 37+30 8	0.13067	0.01562	70.0050		039 2	-0.04560	0.0978	3.0376
49+58 12	0.16472	0.04900	11.7778		056 4	-0.06898	0.9492	6.9416
40+41 16	0.03572	0.01496	5.6977		059 5	0.05593	0.7835	4.5560
					050A 6	0.02634	0.7848	1.0093
					050C 7	0.03900	0.9474	2.2116
					038 9	0.01017	0.7686	0.1501
					45+46 11	0.11448	0.9715	19.2810
					(F) 13	0.01251	0.1438	0.2274
					(P) 14	0.64008	0.9145	1012.0711
					33+35 15	0.00955	0.8334	0.1325

STEP NUMBER   5
VARIABLE ENTERED   4

MULTIPLE R   0.3219
STD. ERROR OF EST.   0.2825

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	13.397	2.679	33.569
RESIDUAL	1452	115.894	0.080	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.21302							
055 3	-0.08418	0.03134	7.2150		037 1	0.04444	0.5461	2.8713
056 4	-0.07924	0.03007	6.9416		039 2	-0.04444	0.0978	2.8714
0 37+30 8	0.13267	0.01560	72.3613		059 5	0.05390	0.7827	4.2280
49+58 12	0.16952	0.04925	9.6067		050A 6	0.02895	0.7838	1.2174
40+41 16	0.03477	0.01494	5.4174		050C 7	0.06215	0.8656	5.6266
					038 9	0.01271	0.7676	0.2345
					45+46 11	0.11195	0.9697	18.4152
					(F) 13	0.01501	0.1435	0.3270
					(P) 14	0.63913	0.9099	1002.0243
					33+35 15	0.01104	0.8330	0.1769

Table 5-28. (Continued)

STEP NUMBER   6
VARIABLF ENTERED   7

MULTIPLE R   0.3272
STD. FRROR OF EST.   0.7821

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	13.844	2.307	29.001
RESIDUAL	1491	115.446	0.080	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.19416)			.				
Q55 3	-0.07558	0.03150	5.7561	.	Q37 1	0.04318	0.5457	2.7083
Q56 4	-0.10113	0.03141	10.3444	.	Q39 2	-0.04318	0.0978	2.7084
Q50C 7	0.06194	0.02611	5.6266	.	Q59 5	0.05250	0.7822	4.0070
Q 37+38 8	0.12967	0.01563	68.8172	.	Q50A 6	-0.00723	0.5903	0.0072
49+58 12	0.13017	0.04937	0.2795	.	38+99 9	0.00897	0.7648	0.1166
40+41 16	0.03491	0.01492	5.4792	.	45+46 11	0.11094	0.9694	18.0685
				.	(E) 13	0.01052	0.1429	0.1604
				.	(P) 14	0.63806	0.9076	995.6701
				.	33+35 15	0.00767	0.8305	0.0853

STEP NUMBER   7
VARIABLF ENTERED   9

MULTIPLE R   0.3273
STD. ERROR OF EST.   0.2822

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	13.854	1.979	24.830
RESIDUAL	1450	115.437	0.080	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.19238)			.				
Q55 3	-0.07370	0.03199	5.3091	.	Q37 1	0.04232	0.5075	2.5993
Q56 4	-0.10131	0.03143	10.3924	.	Q39 2	-0.04232	0.0909	2.5993
Q50C 7	0.06140	0.02617	5.5046	.	Q59 5	0.05173	0.7627	3.8881
Q 37+38 8	0.12807	0.01632	61.5857	.	Q50A 6	-0.00357	0.5778	0.0185
38+99 9	0.00953	0.02791	0.1166	.	45+46 11	0.11067	0.9677	17.9668
49+58 12	0.13032	0.04844	8.1528	.	(E) 13	0.00483	0.0680	0.0493
40+41 16	0.03404	0.01514	5.0557	.	(P) 14	0.63819	0.9064	995.6625
				.	33+35 15	0.00583	0.7899	0.0493

STEP NUMBER   9
VARIABLF ENTERED   15

MULTIPLE R   0.3274
STD. ERROR OF EST.   0.2822

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	13.858	1.732	21.744
RESIDUAL	1449	115.433	0.080	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.18910)			.				
Q55 3	-0.07267	0.03233	5.0540	.	Q37 1	0.04232	0.5075	2.5975
Q56 4	-0.10132	0.03144	10.3862	.	Q39 2	-0.04237	0.0909	2.5975
Q50C 7	0.06115	0.02620	5.4473	.	Q59 5	0.05150	0.7401	3.8503
Q 37+39 8	0.12754	0.01650	59.7578	.	Q50A 6	-0.00401	0.5746	0.0233
38+99 9	0.00813	0.02863	0.0806	.	45+46 11	0.11058	0.9674	17.9266
49+58 12	0.13838	0.04846	8.1535	.	(E) 13	-0.00041	0.0000	0.0002
33+35 15	0.00510	0.02299	0.0493	.	(P) 14	0.63819	0.9061	994.9983
40+41 16	0.03364	0.01525	4.8688	.				

Table 5-28. (Continued)

STEP NUMBER   9
VARIABLE ENTERED   6

MULTIPLE R   0.3274
STD. ERROR OF EST.   0.7423

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	13.960	1.540	19.318
RESIDUAL	1449	115.431	0.980	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.19112			:				
055 3	-0.07412	0.03369	4.8405	:	037 1	0.04227	0.5074	2.5904
056 4	-0.10195	0.03172	10.3288	:	039 2	-0.04227	0.5999	2.5905
050A 6	-0.00552	0.03616	0.0233	:	059 5	0.05173	0.7386	3.8824
050C 7	0.06342	0.03013	4.4317	:	45946 11	0.11116	0.9624	18.1051
0 37+39 8	0.12763	0.01651	59.7267	:	(E) 13	-0.00041	0.0000	0.0002
38+44 9	0.00868	0.02887	0.0905	:	(P) 14	0.63933	0.9035	1000.3388
49+58 12	0.13986	0.04944	8.0036	:				
33+35 15	0.00537	0.02306	0.0541	:				
40+41 16	0.03367	0.01525	4.8722	:				

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	0 37+39 8		0.2893	0.0837	0.0837	132.9689	1
2	49+58 12		0.3043	0.0926	0.0089	14.2542	2
3	40+41 16		0.3101	0.0962	0.0036	5.7585	3
4	055 3		0.3152	0.0993	0.0032	5.1312	4
5	056 4		0.3219	0.1036	0.0043	6.9416	5
6	050C 7		0.3272	0.1071	0.0035	5.6766	6
7	38+44 9		0.3273	0.1072	0.0001	0.1166	7
8	33+35 15		0.3274	0.1072	0.0000	0.0493	8
9	050A 6		0.3274	0.1072	0.0000	0.0233	9

Table 5-29.   Problem Index

SUB-PROBL 4   10
DEPENDENT VARIABLE   P
MAXIMUM NUMBER OF STEPS   37
F-LEVEL FOR INCLUSION   0.000000
F-LEVEL FOR DELETION   9.000000
TOLERANCE LEVEL   0.001000

STEP NUMBER   1
VARIABLE ENTERED   6

MULTIPLE R   0.1715
STD. ERROR OF EST.   0.2637

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
       REGRESSION   1   3.070   3.070   44.146
       RESIDUAL   1456   101.249   0.070

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.22753)							
050A 6	0.17009	0.02560	44.1461		037 1	0.13462	0.9612	26.8540
					039 2	0.20418	0.9340	63.7979
					055 3	-0.08567	0.8520	10.7578
					056 4	-0.06159	0.9934	5.5400
					059 5	0.21722	0.9331	69.6221
					050C 7	-0.01355	0.7285	0.2670
					0 37+39 8	0.21335	0.9257	69.3890
					38+++ 9	0.12429	0.9053	22.8254
					42+43 10	0.66401	0.9805	1147.4099
					45+46 11	0.83245	0.9843	3284.0379
					44+58 12	0.08304	0.9418	10.1026
					(E) 13	0.23504	0.8891	85.0824
					33+35 15	0.09807	0.9357	14.1284
					40+41 16	0.17844	0.9770	47.8497

STEP NUMBER   2
VARIABLE ENTERED   3

MULTIPLE R   0.1917
STD. ERROR OF EST.   0.2628

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
       REGRESSION   2   3.813   1.906   27.600
       RESIDUAL   1455   100.506   0.069

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.22386)							
055 3	-0.09085	0.02953	10.7578		037 1	0.12395	0.9409	22.6857
050A 6	0.13921	0.02764	23.9285		039 2	0.19030	0.8868	54.6313
					056 4	-0.07747	0.9650	8.7785
					059 5	0.19830	0.8809	59.5135
					050C 7	-0.01356	0.7285	0.2672
					0 37+39 8	0.19943	0.8736	60.2740
					38+++ 9	0.10995	0.8701	17.7933
					42+43 10	0.66120	0.9710	1129.4268
					45+46 11	0.83273	0.9827	3289.0122
					44+58 12	0.08852	0.9385	11.4831
					(E) 13	0.22175	0.8378	75.1944
					33+35 15	0.08290	0.8982	10.0616
					40+41 16	0.17434	0.9737	45.5782

Table 5-29. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   12

MULTIPLE R   1.2100
STD. ERROR OF EST.   .2619

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	4.601	1.534	22.368
RESIDUAL	1454	99.719	0.069	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.19725)				037 1	0.12043	0.9389	21.3849
055 3	-0.10268	0.02947	12.1394		039 2	0.18028	0.8491	48.8113
050A 6	0.11143	0.02841	15.4484		056 4	-0.06718	0.9499	6.5874
49+58 12	0.15133	0.04666	11.4831		059 5	0.18646	0.8543	52.3347
					050C 7	-0.00802	0.7256	0.0934
					0 37+39 8	0.19014	0.8583	54.5034
					38+.. 9	0.10345	0.8642	15.7188
					42+43 10	0.65789	0.9570	1109.8054
					45+46 11	0.83383	0.9819	3315.7868
					(F) 13	0.21069	0.8142	67.4962
					33+35 15	0.08003	0.8970	9.3464
					40+41 16	0.16242	0.9463	39.3681

STEP NUMBER   4
VARIABLE ENTERED   4

MULTIPLE R   0.2200
STD. ERROR OF EST.   0.2614

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	5.051	1.263	18.481
RESIDUAL	1453	99.268	0.068	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.25091)				037 1	0.12129	0.9388	21.6813
055 3	-0.11516	0.02982	14.9183		039 2	0.18374	0.8675	50.73C7
056 4	-0.07139	0.02781	6.5874		059 5	0.18499	0.8535	51.4526
050A 6	0.11464	0.02838	16.3219		050C 7	0.01406	0.6525	0.2872
49+58 12	0.13690	0.04493	9.2961		0 37+39 8	0.19327	0.8571	56.3410
					38+.. 9	0.10628	0.8630	16.5884
					42+43 10	0.65651	0.5535	1099.8955
					45+46 11	0.83356	0.9800	3305.9145
					(F) 13	0.21306	0.8136	69.0499
					33+35 15	0.08172	0.8966	9.7627
					40+41 16	0.16192	0.9461	39.0923

STEP NUMBER   5
VARIABLE ENTERED   7

MULTIPLE R   0.2205
STD. ERROR OF EST.   0.2614

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	5.070	1.014	14.835
RESIDUAL	1452	99.248	0.068	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.25114)				037 1	0.12110	0.9386	21.5958
055 3	-0.11610	0.02987	15.1033		039 2	0.18356	0.8673	50.5965
056 4	-0.07438	0.02934	6.7776		059 5	0.18529	0.8533	51.5865
050A 6	0.10592	0.03281	10.4057		0 37+39 8	0.19307	0.8568	56.1795
050C 7	0.01494	0.02788	0.2872		38+.. 9	0.10653	0.8628	16.6569
49+58 12	0.13749	0.04495	9.3554		42+43 10	0.65683	0.9505	1109.9744
					45+46 11	0.83418	0.9795	3319.6685
					(F) 13	0.21317	0.8136	69.0761
					33+35 15	0.08177	0.8966	9.7683
					40+41 16	0.16223	0.9457	39.2216

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	050A 6		0.1715	0.0294	0.0294	44.1461	1
2	055 3		0.1912	0.0366	0.0071	10.7578	2
3	49+58 12		0.2100	0.0441	0.0075	11.4831	3
4	056 4		0.2200	0.0484	0.0043	6.5874	4
5	050C 7		0.2205	0.0486	0.0002	0.2872	5

Table 5-30. Enc⬚⬚⬚ter of Difficulties times Nature of
Difficulties

```
SUB-PROBLEM    7
DEPENDENT VARIABLE        QLSmQL6
MAXIMUM NUMBER OF STEPS        32
F-LEVEL FOR INCLUSION        9.000000
F-LEVEL FOR DELETION        0.000030
TOLERANCE LEVEL        0.001000


STEP NUMBER    1
VARIABLE ENTERED    16

MULTIPLE R        0.1423
STD. ERROR OF EST.        0.3973

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    1        4.749        4.749        30.094
        RESIDUAL    1456        229.784        0.158
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.30200)							
40+41 16	0.10714	0.01953	30.0944		037 1	0.02236	0.9513	0.7281
					039 2	0.08104	0.8928	9.6195
					055 3	-0.07033	0.9475	7.25⬚
					056 4	-0.02794	0.9999	1.1369
					059 5	0.15913	0.9000	37.4030
					059A 6	0.10594	0.9770	16.5159
					050C 7	0.02675	0.9973	1.0421
					0 37+38 8	0.07394	0.9937	7.9993
					⬚38+H 9	0.07338	0.9147	7.8771
					42+43 10	0.13289	0.9729	26.1560
					49+50 12	0.02839	0.9425	1.1739
					(E) 13	0.09116	0.4756	12.1928
					(P) 14	0.83177	0.9601	3764.5612
					33+35 15	0.05508	0.9375	4.4273

```
STEP NUMBER    2
VARIABLE ENTERED    6

MULTIPLE R        0.1748
STD. ERROR OF EST.        0.3952

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION    2        7.328        3.664        23.466
        RESIDUAL    1455        227.205        0.156
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.21933)							
059A 6	0.15772	0.03981	16.5159		037 1	0.00448	0.9239	0.0292
40+41 16	0.08504	0.01965	23.3829		039 2	0.05973	0.8504	5.2061
					055 3	-0.03326	0.9451	1.6103
					056 4	-0.03717	0.9928	2.0121
					059 5	0.13959	0.8617	28.8930
					050C 7	-0.03334	0.7277	1.6196
					0 37+39 8	0.05044	0.8338	3.7153
					⬚⬚⬚ 9	0.04591	0.8436	3.0718
					42+43 10	0.12199	0.9587	21.9665
					49+50 12	0.00539	0.9165	0.0423
					(E) 13	0.06000	0.4246	5.2696
					(P) 14	0.82981	0.9397	3215.0249
					33+35 15	0.03220	0.8898	1.3090

Table 5-30. (Continued)

```
STEP NUMBED    3
VARIABLE ENTERED    8

MULTIPLE R          0.1836
STD. ERROR OF EST.  0.3948

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   3         7.908          2.436       16.911
        RESIDUAL   1454       226.525         0.156
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.22555)				037 1	-0.03611	0.5472	1.8975
050A 6	0.13043	0.03992	12.2912		039 2	0.03611	0.0980	1.8975
0 37+39 8	0.04100	0.02127	3.7153		055 3	-0.02223	0.0038	0.7183
40+41 16	0.08247	0.02069	15.8892		056 4	-0.04091	0.9478	2.4365
					059 5	0.13195	0.8195	25.7057
					050C 7	-0.03502	0.7270	1.7834
					438~~ 9	0.03184	0.7621	1.4747
					42+43 10	0.11355	0.9076	18.9781
					49+58 12	0.00202	0.9124	0.0659
					(E) 13	0.03276	0.1440	1.5607
					(P) 14	0.83426	0.9131	3376.4220
					33+35 15	0.02085	0.8398	0.6321

```
STEP NUMBER    4
VARIABLE ENTERED    4

MULTIPLE R          0.1880
STD. ERROR OF EST.  0.3946

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   4         8.287          2.072       13.305
        RESIDUAL   1453       226.246         0.156
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.26513)				037 1	-0.03684	0.5470	1.9728
056 4	-0.06627	0.04118	2.4365		039 2	0.03684	0.0980	1.9728
050A 6	0.14368	0.03998	12.8792		055 3	-0.02913	0.7834	1.2333
0 37+39 8	0.04336	0.02131	4.1390		059 5	0.13124	0.8193	25.4490
40+41 16	0.08103	0.02070	15.3235		050C 7	-0.02331	0.6545	0.7895
					438~~ 9	0.03387	0.7604	1.6581
					42+43 10	0.11098	0.9029	18.1060
					49+58 12	-0.00359	0.8954	0.0188
					(E) 13	0.03516	0.1435	1.7972
					(P) 14	0.83417	0.9084	3321.6902
					33+35 15	0.02260	0.8384	0.7418

```
STEP NUMBER    5
VARIABLE ENTERED    9

MULTIPLE R          0.1909
STD. ERROR OF EST.  0.3945

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
        REGRESSION   5         8.547          1.709       10.983
        RESIDUAL   1452       225.986         0.156
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.26384)				037 1	-0.04724	0.5104	3.2451
056 4	-0.06683	0.04121	2.6293		039 2	0.04724	0.0914	3.2451
050A 6	0.13235	0.04089	10.4766		055 3	-0.02525	0.7721	0.9257
0 37+39 8	0.03447	0.02239	2.3695		059 5	0.12741	0.7956	23.9450
0 38+ 9	0.05056	0.03914	1.6681		050C 7	-0.02242	0.6541	0.7295
40+41 16	0.07651	0.02099	13.2872		42+43 10	0.11051	0.9026	17.9409
					49+58 12	-0.00405	0.8953	0.0238
					(E) 13	0.01546	0.0686	0.3469
					(P) 14	0.83397	0.9073	3314.2618
					33+35 15	0.01546	0.7969	0.3469

Table 5-30. (Continued)

STEP NUMBER 6
VARIABLE ENTERED 3

MULTIPLE R 0.1925
STD. ERROR OF EST. 0.3545

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	8.691	1.448	9.306
RESIDUAL	1491	225.842	0.156	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.29325			:				
055 3	-0.04490	0.04656	0.9257	:	037 1	-0.04616	0.5894	3.3906
056 4	-0.07303	0.04171	3.0644	:	039 2	0.04616	0.0912	3.0960
058A 6	0.17019	0.04289	7.8955	:	059 5	0.12496	0.7700	23.0082
0 37+39 8	0.03956	0.02276	1.8325	:	0500 7	-0.02101	0.6519	0.6405
36+39 9	0.04599	0.03943	1.3601	:	42+43 10	0.10941	0.9003	17.5603
40+41 16	0.07713	0.02109	13.4399	:	49+50 12	-0.00232	0.8910	0.0078
				:	(E) 13	0.01258	0.6676	0.2296
				:	(P) 14	0.83398	0.9052	3312.2102
				:	33+35 15	0.01258	0.7859	0.2296

STEP NUMBER 7
VARIABLE ENTERED 2

MULTIPLE R 0.1936
STD. ERROR OF EST. 0.3946

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	8.790	1.256	8.066
RESIDUAL	1490	225.743	0.156	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.29252			:				
055 3	-0.04266	0.04664	0.8366	:	037 1	-0.04592	0.5093	3.0617
056 4	-0.06170	0.04405	1.9619	:	039 2	0.04592	0.0912	3.0617
058A 6	0.13996	0.04962	8.0201	:	059 5	0.12464	0.7705	22.8647
050C 7	-0.03369	0.04209	0.6405	:	42+43 10	0.11072	0.8978	17.9829
0 37+39 8	0.03106	0.02277	1.8602	:	49+50 12	-0.00279	0.8906	0.0113
36+39 9	0.04515	0.03944	1.3721	:	(E) 13	0.01260	0.6676	0.2299
40+41 16	0.07670	0.02101	13.3303	:	(P) 14	3.83452	0.9051	33..0847
				:	33+35 15	0.01260	0.7859	0.2299

STEP NUMBER 8
VARIABLE ENTERED 15

MULTIPLE R 0.1960
STD. ERROR OF EST. 0.3947

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	9.876	1.103	7.063
RESIDUAL	1489	225.707	0.156	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.29345			:				
055 3	-0.04002	0.04698	0.7255	:	037 1	-0.04595	0.5093	3.0637
056 4	-0.06197	0.04407	1.9773	:	039 2	0.04595	0.0912	3.0637
058A 6	0.13825	0.04956	7.7820	:	059 5	0.12428	0.7494	22.7147
050C 7	-0.03370	0.04210	0.6406	:	42+43 10	0.11067	0.8977	17.9546
0 37+39 8	0.02951	0.02301	1.6451	:	49+50 12	-0.00254	0.8902	0.0094
36+39 9	0.04131	0.04035	1.0489	:	(E) 13	0.00035	0.0000	0.0002
33+35 15	0.01545	0.03221	0.2295	:	(P) 14	0.83449	0.9049	3321.1188
40+41 16	0.07555	0.02115	12.7572	:				

Table 5-20.   (Continued)

STEP NUMBER   9
VARIABLE ENTERED   12

MULTIPLE R   0.1940
STD. ERROR OF EST. 0.1948

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
     REGRESSION   9   4.978   0.981   5.293
     RESIDUAL   1440   275.705   0.156

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.24495							
055 3	-0.01971	0.04712	0.7502		037 6	-0.04618	6.5574	3.0931
056 5	-0.04245	0.04436	1.9917		036 7	0.04618	0.0909	3.0931
054 6	0.13971	0.05056	7.5919		059 5	0.12549	0.7396	23.1533
056 7	-0.03377	0.04712	0.4635		62043 10	0.11316	0.8928	18.1051
0 37+3 8	5.07069	0.02300	1.4532		051 13	0.00035	0.0000	0.0002
30+77 9	0.04141	0.04037	1.0521		101 14	0.83524	0.9935	3339.3591
49+59 12	-0.00464	0.04913	0.0944					
33039 15	0.01539	0.03275	0.2279					
46+41 16	0.07581	0.02133	12.6393					

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	46+41 16		0.1423	0.0203	0.0203	30.0944	1
2	0504 6		0.1768	0.0312	0.0110	16.5159	2
3	0 37+3 8		0.1836	0.0337	0.0025	3.7153	3
4	046 6		0.1880	0.0353	0.0016	2.4365	4
5		9	0.1909	0.0364	0.0011	1.6641	5
6	055 3		0.1925	0.0371	0.0006	0.9257	6
7	050X 7		0.1934	0.0375	0.0004	0.6495	7
8	33035 15		0.1940	0.0376	0.0002	0.2299	8
9	49+59 12		0.1940	0.0376	0.0000	0.0094	9

Table 5-31. Number of Personnel Supervised by User plus User's Equivalent GS Rating

```
SUB-PROBLEM        6
DEPENDENT VARIABLE         3(QL9-QS8)
MAXIMUM NUMBER OF STEPS    28
F-LEVEL FOR INCLUSION      0.000000
F-LEVEL FOR DELETION       0.000000
TOLERANCE LEVEL            0.001000


STEP NUMBER    1
VARIABLE ENTERED    2

MULTIPLE R         0.3450
STD. ERROR OF EST.    0.1477

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    1        4.377            4.377       200.607
      RESIDUAL    1485       37.388           0.072
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.01632				Q10	1	-0.07189	0.9864	7.7087
Q40 2	0.42517	0.03001	209.5969		Q55	3	-0.07062	0.9969	7.4392
					Q56	4	-0.06950	0.9785	6.9966
					Q63	5	0.14816	0.9904	33.3072
					Q503	6	0.26437	0.9989	115.1770
					Q50C	7	0.13706	0.9731	28.4132
					2+7	8	0.01405	1.0000	0.3026
					3X4	9	-0.04842	1.0000	3.5165
					5+6	10	0.14836	0.9949	33.4086
					8+9	11	-0.06460	0.9978	7.9507
					51+52	13	0.13279	0.5195	26.6350
					(F)	14	0.01426	0.9993	0.3016

```
STEP NUMBER    2
VARIABLE ENTERED    6

MULTIPLE R         0.4272
STD. ERROR OF EST.    0.1423

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    2        6.710            3.355       165.652
      RESIDUAL    1484       30.055           0.020
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	-0.06874				Q10	1	-0.08406	0.9853	10.5547
Q40 2	0.43559	0.02896	226.5968		Q55	3	0.03833	0.8454	2.1818
Q503 6	0.14652	0.01365	115.1770		Q56	4	-0.09786	0.9727	12.8993
					Q63	5	0.09553	0.9512	13.6574
					Q50C	7	-0.00457	0.7052	0.0310
					2+7	8	0.03582	0.9953	1.9054
					3X4	9	-0.09126	0.9795	12.4545
					5+6	10	0.12864	0.9863	24.9555
					8+9	11	0.02754	0.9795	1.1272
					51+52	13	0.16396	0.5152	40.9703
					(F)	14	0.03423	0.9944	1.7395

Table 5-31.   (Continued)

STEP NUMBER   3
VARIABLE ENTERED   13

MULTIPLE R   0.4527
STD. ERROR OF EST.   0.1404

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	7.519	2.506	127.044
RESIDUAL	1493	29.767	0.020	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	-0.02510								
048	2	0.25075	0.03967	42.9733	010	1	-0.08015	0.9843	9.5020
055A	6	0.15442	0.01351	130.2331	055	3	0.04324	0.8448	2.3701
51+52	13	0.24309	0.03906	40.9703	056	4	-0.08961	0.9727	12.0786
					063	5	0.08112	0.9443	9.9168
					050C	7	-0.00836	0.7940	0.3967
					2+7	8	0.04585	0.9621	3.1223
					3X4	9	-0.08974	0.9749	11.9904
					5+6	10	0.13293	0.9941	21.6472
					8+9	11	0.03409	0.9268	2.2394
					(F)	14	0.03053	0.5039	2.3024

STEP NUMBER   4
VARIABLE ENTERED   4

MULTIPLE R   0.4597
STD. ERROR OF EST.   0.1399

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	7.770	1.942	99.282
RESIDUAL	1492	29.035	0.020	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.01564								
048	2	0.24564	0.03964	38.3500	010	1	-0.02199	0.5107	0.7162
056	4	-0.05223	0.01455	12.8748	055	3	0.02742	0.8198	1.1469
055A	6	0.15811	0.01351	136.8875	063	5	0.08471	0.9412	10.7041
51+52	13	0.24272	0.03794	40.9247	050C	7	0.02206	0.6344	0.7214
					2+7	8	0.04510	0.9620	3.0300
					3X4	9	-0.08909	0.9725	12.0470
					5+6	10	0.12249	0.9709	22.7192
					8+9	11	0.02157	0.9998	0.6891
					(F)	14	0.02650	0.9816	1.2935

STEP NUMBER   5
VARIABLE ENTERED   3

MULTIPLE R   0.4604
STD. ERROR OF EST.   0.1399

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	7.792	1.558	79.663
RESIDUAL	1491	28.973	0.020	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.00466								
048	2	0.24416	0.03966	37.8563	010	1	-0.02051	0.5091	0.6228
055	3	0.01699	0.01586	1.1469	063	5	0.09191	0.9056	12.6079
056	4	-0.04949	0.01477	11.2277	050C	7	0.02043	0.6341	0.6182
055A	6	0.16413	0.01464	125.7602	2+7	8	0.04466	0.9916	2.9572
51+52	13	0.24386	0.03795	41.2872	3X4	9	-0.08648	0.9549	11.2823
					5+6	10	0.12223	0.9702	22.4474
					8+9	11	0.00497	0.6791	0.1191
					(F)	14	0.02625	0.9746	1.0204

Table 5-31. (Continued)

```
STEP NUMBER      6
VARIABLE ENTERED    7

MULTIPLE R            0.4607
STD. ERROR OF EST.   0.1399

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    6         7.804          1.301        66.472
      RESIDUAL    1480        28.961          0.020
```

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.00292)			.					
048 2	0.24780	0.03996	38.4599	.	010 1		-0.02243	0.5051	0.7444
055 3	0.01623	0.01549	1.0434	.	063 5		0.09279	0.9042	12.8439
056 4	-0.05338	0.01558	11.7431	.	2+7 8		0.04406	0.9907	2.9764
050A 6	0.17725	0.01705	85.0712	.	3X4 9		-0.08654	0.9543	11.1605
050C 7	0.01171	0.01449	0.6182	.	5+6 10		0.12302	0.9691	22.7268
51+52 13	0.24308	0.03797	40.9862	.	8+9 11		0.00781	0.6769	0.0901
				.	(F) 14		0.02666	0.9742	1.0520

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	048	2	0.3450	0.1191	0.1191	200.6969	1
2	050A	6	0.4272	0.1825	0.0634	115.1770	2
3	51+52	13	0.4522	0.2045	0.0220	40.9703	3
4	056	4	0.4597	0.2113	0.0069	12.8768	4
5	055	3	0.4604	0.2119	0.0006	1.1469	5
6	050C	7	0.4607	0.2123	0.0003	0.6182	6

Table 5-32.   User's Highest Degree

```
SUB-PROBLEM     1
DEPENDENT VARIABLE          Q50A
MAXIMUM NUMBER OF STEPS      28
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER    1
VARIABLE ENTERED    -

MULTIPLE R          0.0336
STD. ERROR OF EST.  0.270
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	0.122	0.122	1.674
RESIDUAL	1485	108.664	0.073	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.58058)							
Q48 2	-0.07112	0.05497	1.6740		Q10 1	0.03371	0.9864	1.6888
					Q55 3	-0.38984	0.9969	265.9478
					Q56 4	0.07708	0.9785	8.8691
					Q63 5	0.21738	0.9984	73.6053
					Q50C 7	0.52469	0.9731	563.7443
					2+7 8	-0.06846	1.0000	6.9882
					3X4 9	0.14304	1.0000	30.9958
					5+6 10	0.09307	0.9949	12.9658
					8+9 11	-0.26168	0.9978	109.0852
					49+58 12	0.26837	0.8809	115.1770
					51+52 13	-0.09130	0.51	12.6743
					(F) 14	-0.06945	0.9993	7.1923

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q48	2	0.0336	0.0011	0.0011	1.6740	1

Table 5-33. Field of User's Highest Degree

```
SUB-PROBLM     2
DEPENDENT VARIABLE        Q50C
MAXIMUM NUMBER OF STEPS     28
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000


STEP NUMBER    1
VARIABLE ENTERED    2

MULTIPLE R          0.1640
STD. ERROR OF EST.  0.3020

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   1         3.746          3.746        41.055
        RESIDUAL   1485       135.482         0.091
```

	VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.77168)							
Q4A 2	-0.39339	0.06138	41.0548		Q10 1	0.25090	0.9864	99.6925
					Q55 3	-0.20281	0.9969	63.6609
					Q56 4	0.30432	0.9725	152.0142
					Q63 5	0.09558	0.9984	10.9488
					Q50A 6	0.52469	0.9989	563.7443
					2+7 8	-0.01370	1.0000	0.2788
					3X4 9	0.07174	1.0000	7.6770
					5+6 10	-0.00986	0.9940	0.1444
					8+9 11	-0.12053	0.9978	21.8752
					49+58 12	0.13706	0.8809	28.4132
					51+52 13	-0.03044	0.5195	1.3764
					(F) 14	-0.07787	0.9993	9.0532

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

```
SUMMARY TABLE
```

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q4A	2	0.1640	0.0269	0.0269	41.0548	1

Table 5-34. Job Experience of User plus Company Experience of User

```
SUB-PROBLEM    3
DEPENDENT VARIABLE      2(Q51+Q52)
MAXIMUM NUMBER OF STEPS     25
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED    2

MULTIPLE R           0.6931
STD. ERROR OF EST.   0.0561
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	12.677	12.677	1373.269
RESIDUAL	1485	13.703	0.009	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	-0.19745)							
Q48 2	0.72354	0.01952	1373.2693		Q10 1	-0.03365	0.9864	1.6821
					Q55 3	0.01139	0.9969	0.1925
					Q56 4	-0.01496	0.9785	0.3321
					Q63 5	0.07429	0.9984	8.2366
					Q50A 6	-0.09130	0.9989	12.4743
					Q50C 7	-0.03044	0.9731	1.3764
					2+7 8	-0.05032	1.0000	3.7671
					3X4 9	0.01191	1.0000	0.2071
					5+6 10	-0.02343	0.9949	0.8149
					8+9 11	-0.02814	0.9978	1.1764
					49+58 12	0.13279	0.8809	26.6358
					(F) 14	-0.01647	0.9993	0.4026

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q48 2		0.6931	0.4805	0.4805	1373.2693	1

Table 5-35. Kind of Work Position

```
SUB-PROBLEM     4
DEPENDENT VARIABLE        Q55
MAXIMUM NUMBER OF STEPS    28
F-LEVEL FOR INCLUSION    0.000000
F-LEVEL FOR DELETION     0.000000
TOLERANCE LEVEL          0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED    6

MULTIPLE R          0.3909
STD. ERROR OF EST.  0.2327

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   1        14.498          14.498       267.312
        RESIDUAL   1485        80.388          0.054
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.58422)				010	1	-0.16119	0.9986	39.5846
Q50A	6	-0.36506	0.02231	267.8117	048	2	0.04623	0.9989	3.1786
					056	4	-0.17650	0.9934	47.7185
					063	5	-0.19615	0.9535	59.3830
					Q50C	7	-0.00578	0.7267	0.0495
					2+7	8	0.02273	0.9953	0.7669
					3X4	9	-0.14621	0.9796	32.4182
					5+6	10	0.05247	0.9918	3.9415
					8+9	11	0.51144	0.9309	525.6797
					49+58	12	0.05249	0.9423	4.0996
					51+52	13	0.01305	0.9971	0.2528
					(F)	14	0.10345	0.9951	16.0538

```
STEP NUMBER    2
VARIABLE ENTERED    2

MULTIPLE R          0.3932
STD. ERROR OF EST.  0.2325

ANALYSIS OF VARIANCE
                    DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
        REGRESSION   2        14.669          7.335       135.692
        RESIDUAL   1484        80.216          0.054
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.53254)				010	1	-0.15706	0.9853	37.5090
048	2	0.08428	0.04727	3.1786	056	4	-0.17181	0.9727	45.1084
Q50A	6	-0.36372	0.02230	265.9478	063	5	-0.19886	0.9512	61.0586
					Q50C	7	0.00221	0.7052	0.0072
					2+7	8	0.02276	0.9953	0.7687
					3X4	9	-0.14672	0.9795	32.6271
					5+6	10	0.04820	0.5863	3.4531
					8+9	11	0.51057	0.9295	522.9108
					49+58	12	0.03833	0.8175	2.1818
					51+52	13	-0.02640	0.5152	1.0339
					(F)	14	0.10244	0.9944	15.7272

Table 5-35. (Continued)

STEP NUMBER   3
VARIABLE ENTERED   13

MULTIPLE R   0.3939
STD. ERROR OF EST.   0.2325

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   3   14.725   4.908   90.808

        RESIDUAL   1483   80.161   0.054

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | C.52109)								
Q4R 7	0.13053	0.06560	3.9593		Q10	1	-0.15800	0.9843	37.9454
Q5CA 6	-0.36580	0.02240	266.7609		Q56	4	-0.17209	0.9727	45.2274
51+52 13	-0.06412	0.06306	1.0339		Q63	5	-0.19730	0.9423	60.0249
					Q50C	7	0.00275	0.7049	0.0112
					2+7	8	0.02136	0.9921	0.6727
					3X4	9	-0.14615	0.9789	32.3474
					5+6	10	0.04782	0.9861	3.3971
					8+9	11	0.51007	0.9268	521.1658
					49+58	12	0.04326	0.7955	2.7781
					(F)	14	0.10190	0.9939	15.5485

STEP NUMBER   4
VARIABLE ENTERED   7

MULTIPLE R   0.3939
STD. ERROR OF EST.   0.2326

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION   4   14.726   3.681   68.063
        RESIDUAL   1482   80.160   0.054

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT | 0.51999)								
Q48 2	0.13150	0.06626	3.9387		Q10	1	-0.16312	0.9099	41.5124
Q50A 6	-0.36726	0.02631	194.8381		Q56	4	-0.18202	0.8781	50.7465
Q50C 7	0.00249	0.02348	0.0112		Q63	5	-0.19733	0.9410	60.0043
51+52 13	-0.06426	0.06309	1.0373		2+7	8	0.02173	0.9913	0.6680
					3X4	9	-0.14614	0.9789	32.3209
					5+6	10	0.04813	0.9814	3.4383
					8+9	11	0.51013	0.9264	520.9831
					49+58	12	0.04328	0.7955	2.7793
					(F)	14	0.10215	0.9916	15.6160

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	Q50A	6	0.3909	0.1528	0.1528	267.8117	1
2	Q4R	2	0.3932	0.1546	0.0018	3.1746	2
3	51+52 13		0.3939	0.1552	0.0006	1.0339	3
4	Q50C	7	0.3939	0.1552	0.0000	0.0112	4

Table 5-36. Field of Work Position

```
SUB-PROBLEM    5
DEPENDENT VARIABLE        Q56
MAXIMUM NUMBER OF STEPS    24
F-LEVEL FOR INCLUSION     0.000400
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000
```

```
STEP NUMBER   1
VARIABLE ENTERED    7

MULTIPLE R         0.3215
STD. ERROR OF EST.   0.2395

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    1        9.810           9.810       171.167
      RESIDUAL    1485       85.179          0.057
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
				.				
(CONSTANT	0.50979)			.				
Q50C 7	0.26555	0.02039	171.1666	.	Q10 1	0.67188	0.9298	1221.1833
				.	Q48 2	-0.10041	0.9731	15.1145
				.	Q55 3	-0.13658	0.9504	28.2110
				.	Q63 5	0.01871	0.9940	0.5197
				.	Q50A 6	-0.10772	0.7267	17.4212
				.	2+7 8	-0.01031	0.9598	0.1578
				.	3X4 9	0.07067	0.9951	7.4489
				.	5+6 10	-0.12445	0.9995	23.3438
				.	8+9 11	-0.15720	0.9940	37.6024
				.	49+58 12	-0.14479	0.9951	31.7758
				.	51+52 13	-0.07325	0.9817	8.0044
				.	(F) 14	-0.09791	0.9934	14.3634

```
STEP NUMBER   2
VARIABLE ENTERED    6

MULTIPLE R         0.3373
STD. ERROR OF EST.   0.2382

ANALYSIS OF VARIANCE
                   DF    SUM OF SQUARES    MEAN SQUARE    F RATIO
      REGRESSION    2        10.806          5.403       95.240
      RESIDUAL    1484       84.191          0.057
```

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
				.				
(CONSTANT	0.54232)			.				
Q50A 6	-0.11181	0.02479	17.4212	.	Q10 1	0.66755	0.9157	1192.1008
Q50C 7	0.31722	0.02368	179.4619	.	Q48 2	-0.09446	0.9693	13.3502
				.	Q55 3	-0.18687	0.9472	52.4757
				.	Q63 5	0.04204	0.9518	2.6261
				.	2+7 8	-0.01820	0.9946	0.4915
				.	3X4 9	0.08527	0.9796	10.8616
				.	5+6 10	-0.11307	0.9853	19.2042
				.	8+9 11	-0.18850	0.9308	54.6361
				.	49+58 12	-0.12330	0.9381	22.8926
				.	51+52 13	-0.07604	0.9812	8.6239
				.	(F) 14	-0.10208	0.9923	15.6172

Table 5-36.   (Continued)

STEP NUMBER   3
VARIABLE ENTERED   2

| MULTIPLE R | 0.3488 |
| STD. ERROR OF EST. | 0.2372 |

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	11.558	3.853	69.472
RESIDUAL	1483	83.440	0.056	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.65524)							
048 2	-0.17889	0.04896	13.3502		Q10 1	0.66554	0.9112	1178.4245
050A 6	-0.10575	0.02673	15.6527		Q55 3	-0.18153	0.8454	50.5012
050C 7	0.30219	0.02394	159.3523		063 5	0.04628	0.9501	3.1008
					2+7 8	-0.01788	0.9946	0.4738
					3X4 9	0.08629	0.9795	11.1185
					5+6 10	-0.10790	0.9816	17.4575
					8+9 11	-0.18553	0.9291	52.8309
					49+58 12	-0.09623	0.8175	13.8506
					51+52 13	-0.01515	0.5156	0.3403
					(F) 14	-0.10102	0.9921	15.2786

STEP NUMBER   4
VARIABLE ENTERED   13

| MULTIPLE R | 0.3491 |
| STD. ERROR OF EST. | 0.2373 |

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	11.977	2.894	51.416
RESIDUAL	1482	83.420	0.056	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.64841)							
048 2	-0.15171	0.06760	5.0372		Q10 1	0.66552	0.9099	1177.4988
050A 6	-0.10714	0.02684	15.9327		Q55 3	-0.18202	0.8448	50.7465
050C 7	0.30247	0.02395	159.5173		063 5	0.04799	0.9410	3.4191
51+52 13	-0.03754	0.06436	0.3403		2+7 8	-0.01878	0.9913	0.5226
					3X4 9	0.08671	0.9789	11.2206
					5+6 10	-0.10813	0.9814	17.5209
					8+9 11	-0.18666	0.9264	53.4617
					49+58 12	-0.09504	0.7955	13.4988
					(F) 14	-0.10139	0.9916	15.3813

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	050C	7	0.3215	0.1034	0.1034	171.1666	1
2	050A	6	0.3373	0.1138	0.0104	17.4212	2
3	048	2	0.3488	0.1217	0.0079	13.3502	3
4	51+52	13	0.3491	0.1219	0.0002	0.3403	4

Table 5-37. Interviewer's Assessment of User's Information Needs

```
SUB-PROBLEM     8
DEPENDENT VARIABLE        Q96
MAXIMUM NUMBER OF STEPS    32
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED   15
```

```
MULTIPLE R            0.3448
STD. ERROR OF EST.    0.2647
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	1	13.760	13.760	196.392
RESIDUAL	1456	102.013	0.070	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.43225)				Q37 1	0.19650	0.9298	59.4840
33035 15	0.26853	0.01916	196.3923		Q39 2	0.22244	0.9046	76.0972
					Q45 3	-0.23845	0.9237	87.7170
					Q56 4	-0.01148	0.9952	0.1918
					Q50A 6	0.18848	0.9357	53.5944
					Q50C 7	0.06384	0.9821	5.9547
					Q 37+39 8	0.25180	0.8856	98.4999
					38+++ 9	0.23997	0.8400	86.9051
					42+43 10	0.14868	0.9839	32.8916
					45+46 11	0.17411	0.9922	45.4853
					49+50 12	0.19116	0.9930	55.1868
					(E) 13	0.33392	0.5915	182.5957
					(P) 14	0.21413	0.9812	69.9192
					40+41 16	0.23893	0.9375	88.0902

```
STEP NUMBER    2
VARIABLE ENTERED   8
```

```
MULTIPLE R            0.4180
STD. ERROR OF EST.    0.2563
```

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	2	20.228	10.114	154.022
RESIDUAL	1455	95.545	0.066	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.35450)				Q37 1	0.04690	0.5459	3.2059
0 37+39 8	0.13295	0.01340	98.4999		Q39 2	-0.04690	0.0978	3.2058
33035 15	0.20228	0.01971	105.3945		Q45 3	-0.18823	0.8679	53.4104
					Q56 4	-0.02751	0.9916	1.1009
					Q50A 6	0.14445	0.8963	30.9872
					Q50C 7	0.03468	0.9677	1.7513
					38+++ 9	0.17044	0.7629	43.5003
					42+43 10	0.08810	0.9154	11.3728
					45+46 11	0.15632	0.9836	36.4181
					49+50 12	0.15945	0.9695	37.9298
					(E) 13	0.22708	0.2311	79.0558
					(P) 14	0.16873	0.9349	42.6073
					40+41 16	0.18098	0.8632	49.3376

Table 5-37. (Continued)

STEP NUMBER 3
VARIABLE ENTERED 3

MULTIPLE R 0.4516
STD. ERROR OF EST. 0.2518

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	23.613	7.871	124.183
RESIDUAL	1454	92.15	0.063	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.55998)			.				
055 3	-0.20481	0.02802	53.4104	.	037 1	0.05120	0.5453	3.8196
0 37+39 8	0.10857	0.01358	63.9465	.	039 2	-0.05120	0.0977	3.8195
33+35 15	0.17501	0.01972	78.7221	.	056 4	-0.06056	0.9644	5.3497
				.	050A 6	0.09330	0.9137	12.7591
				.	050C 7	0.00720	0.9665	0.0754
				.	3P+++ 9	0.14801	0.7477	32.5445
				.	42+43 10	0.07971	0.9128	9.2901
				.	45+46 11	0.15126	0.9818	34.0207
				.	49+58 12	0.16631	0.9691	41.3308
				.	(F) 13	0.22334	0.2307	76.2846
				.	(P) 14	0.16035	0.9314	38.3472
				.	40+41 16	0.18909	0.9627	53.8771

STEP NUMBER 4
VARIABLE ENTERED 16

MULTIPLE R 0.4921
STD. ERROR OF EST. 0.2473

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	26.909	6.727	109.994
RESIDUAL	1453	88.864	0.061	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.56187)			.				
055 3	-0.20982	0.02754	58.0601	.	037 1	0.05625	0.5455	4.6094
0 37+39 8	0.08014	0.01389	33.2983	.	039 2	-0.05625	0.0977	4.6093
33+35 15	0.15291	0.01961	60.7200	.	056 4	-0.05317	0.9625	4.1171
40+41 16	0.09608	0.01309	53.8771	.	050A 6	0.08578	0.8118	10.7622
				.	050C 7	0.00974	0.9466	0.1377
				.	3P+++ 9	0.12412	0.7320	22.7179
				.	42+43 10	0.06719	0.9079	6.5846
				.	45+46 11	0.13471	0.9712	26.8570
				.	49+58 12	0.14334	0.9494	30.4611
				.	(F) 13	0.12412	0.0441	22.7183
				.	(P) 14	0.14109	0.9178	29.4905

STEP NUMBER 5
VARIABLE ENTERED 12

MULTIPLE R 0.4982
STD. ERROR OF EST. 0.2448

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	28.735	5.747	95.871
RESIDUAL	1452	87.030	0.060	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.50378)			.				
055 3	-0.21240	0.02727	60.6870	.	037 1	0.06333	0.5444	5.8438
0 37+39 8	0.07172	0.01383	26.8812	.	039 2	-0.06333	0.0975	5.8437
49+58 12	0.22011	0.04151	30.4611	.	056 4	-0.03664	0.9487	1.9505
33+35 15	0.15188	0.01941	61.1996	.	050A 6	0.05677	0.7740	4.6908
40+41 16	0.08577	0.01309	42.9077	.	050C 7	0.00241	0.9441	0.0085
				.	3P+++ 9	0.11802	0.7300	20.4957
				.	42+43 10	0.05514	0.9006	4.4244
				.	45+46 11	0.13315	0.9708	26.1907
				.	(F) 13	0.11802	0.0440	20.4961
				.	(P) 14	0.13336	0.9138	26.2715

Table 5-37. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   9

MULTIPLE R   0.5006
STD. ERROR OF EST.   0.2432

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	29.947	4.991	84.392
RESIDUAL	1451	85.826	0.059	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.44238)							
055 1	-0.19419	0.02738	50.2966		037 1	0.03421	0.5000	1.6990
Q 37+39 8	0.05572	0.01419	15.4218		039 2	-0.03421	0.6910	1.6990
38+44 9	0.11149	0.02463	20.4957		056 4	-0.04077	0.9477	2.4144
49+50 12	0.21936	0.04129	28.2221		050A 6	0.04149	0.7549	2.5009
33+35 15	0.13180	0.01979	44.3563		050C 7	-0.00157	0.9410	0.0277
40+41 16	0.07765	0.01313	34.9701		42+43 10	0.05455	0.9514	4.3272
					45+46 11	0.12993	0.9495	24.8999
					(E) 13	0.00093	0.0000	0.0013
					(P) 14	0.13054	0.9129	25.1387

STEP NUMBER   7
VARIABLE ENTERED   6

MULTIPLE R   0.5098
STD. ERROR OF EST.   0.2431

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	30.095	4.299	72.759
RESIDUAL	1450	85.678	0.059	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.47114)							
055 3	-0.18073	0.02966	39.7654		037 1	0.03457	0.5000	1.7330
050A 6	0.04281	0.02707	2.5009		039 2	-0.03457	0.6910	1.7330
Q 37+39 8	0.05442	0.01421	14.6779		056 4	-0.04207	0.9469	2.5696
38+44 9	0.10619	0.02484	18.2712		050C 7	-0.02772	0.7241	1.1140
49+50 12	0.20530	0.04222	23.6659		42+43 10	0.05359	0.9000	4.1736
33+35 15	0.12911	0.01985	42.2970		45+46 11	0.12746	0.9446	23.9303
40+41 16	0.07767	0.01312	35.0327		(E) 13	0.00094	0.0000	0.0013
					(P) 14	0.12815	0.9088	24.1934

STEP NUMBER   8
VARIABLE ENTERED   4

MULTIPLE R   0.5111
STD. ERROR OF EST.   0.2429

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	30.244	3.781	64.054
RESIDUAL	1449	85.527	0.059	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.50189)							
055 3	-0.18732	0.02894	41.9905		037 1	0.03334	0.5075	1.6115
056 4	-0.04151	0.02589	2.5696		039 2	-0.03334	0.0909	1.6114
050A 6	0.04411	0.02707	2.6560		050C 7	-0.01919	0.6516	0.5344
Q 37+39 8	0.05514	0.01420	15.0701		42+43 10	0.05080	0.8955	3.7471
38+44 9	0.10731	0.02484	18.6634		45+46 11	0.12577	0.9628	23.2737
49+50 12	0.19674	0.04253	21.4088		(E) 13	0.00095	0.0000	0.0013
33+35 15	0.12945	0.01984	42.5623		(P) 14	0.12548	0.9037	23.1625
40+41 16	0.07701	0.01312	34.4450					

Table 5-37.   (Continued)

STEP NUMBER   9
VARIABLE ENTERED   7

MULTIPLE R   C.5113
STD. ERROR OF EST.   0.2430

ANALYSIS OF VARIANCE
	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	30.246	3.363	56.968
RESIDUAL	1440	85.507	0.059	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.5016R							
055 3	-0.18436	0.02899	41.3051		017 1	0.03351	0.5074	1.6268
056 4	-0.07451	0.02730	1.7882		019 2	-0.03351	0.5000	1.6267
052 6	0.05299	0.03112	2.8960		42043 10	0.05173	0.9928	3.8076
055 7	-0.01499	0.02593	0.3344		45046 11	0.12549	0.9424	23.1533
0 3753 8	0.05530	0.01421	15.1805		113 13	0.00096	0.0000	0.0013
9	0.10733	0.02685	15.5527		104 14	0.12572	0.9035	23.2303
49058 12	0.19623	0.04255	21.7680					
33035 15	0.12945	0.01295	42.5634					
40041 16	0.07685	0.01313	34.2649					

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	33035 15	0.3448	0.1189	0.1189	196.3923	1
2	0 3753? 8	0.4180	0.1747	0.0559	98.4999	2
3	055 3	0.4516	0.2040	0.0292	53.4104	3
4	42041 16	0.4871	0.2374	0.0285	53.0771	4
5	49058 12	0.4982	0.2482	0.0158	30.4611	5
6	9	0.5086	0.2587	0.0105	20.4957	6
7	052 6	0.5093	0.2599	0.0013	2.5080	7
8	055 4	0.5111	0.2613	0.0013	2.5696	8
9	055 7	0.5113	0.2614	0.0002	0.3344	9

Table 5-38. Interviewer's Assessment of Difficulty in Use of
Information plus Interviewer's Assessment of
Difficulty in Acquisition of Information

```
SUB-PROBLM   12
DEPENDENT VARIABLE         ½(Q61+Q62)
MAXIMUM NUMBER OF STEPS    64
F-LEVEL FOR INCLUSION      0.000000
F-EVEL FOR DELETION        0.000000
TOLRANCE LEVEL             0.001000
```

```
STEP NUMBER    1
VARIABLE ENTERED   19

MULTIPLE R            0.2393
STD. ERROR OF EST.   0.2440

ANALYSIS OF VARIANCE
                DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
   REGRESSION    1        14.844         14.844       249.406
   RESIDUAL    4107       244.440         0.060
```

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.54780)								
8+9 19	-0.29658	0.01878	249.4064		Q10	1	-0.02340	0.9679	2.2490
					Q32	2	0.10305	0.9919	44.0746
					Q55	3	-0.09582	0.6875	38.0493
					Q56	4	-0.03996	0.9638	6.5658
					Q12	5	0.09934	0.9964	40.9272
					Q13	6	0.09353	0.9854	36.2372
					Q14	7	0.07977	0.9997	26.2934
					Q15	8	-0.00347	0.9998	0.0495
					Q17	9	-0.11917	0.9942	59.1508
					Q16	10	-0.01686	0.9872	1.1678
					Q23	11	0.12579	0.9726	66.0186
					Q26	12	0.05941	0.9996	14.5428
					Q27	13	0.05601	0.9986	12.9205
					Q28	14	0.03219	0.9596	4.2602
					Q29	15	-0.00067	0.9715	0.0018
					2+7	16	-0.05411	0.9996	12.0562
					3X4	17	0.03793	0.9619	5.9149
					5+6	18	0.09076	1.0000	34.1059
					49+58	20	0.09054	0.9984	33.9379
					14+15	22	0.03761	1.0000	5.9147
					14+17	23	-0.04250	0.9947	7.4299
					18+26	24	0.12372	0.9834	63.8254
					20+27	25	0.12487	0.9868	65.0351
					21+24	26	0.01626	0.9972	1.0864
					22+25	27	0.08039	0.9912	7047
					(E)	28	0.24329	0.9559	3.3225
					(P)	29	0.11724	0.9793	57.2702
					(F)	30	0.02459	0.9761	2.4844
					(I)	31	0.05137	0.9874	10.8652
					30+31	32	0.01556	0.9998	0.9943

```
STEP NUMBER    2
VARIABLE ENTERED   25

MULTIPLE R            0.2682
STD. ERROR OF EST.   0.2421

ANALYSIS OF VARIANCE
                DF    SUM OF SQUARES   MEAN SQUARE    F RATIO
   REGRESSION    2        18.655         9.328        159.165
   RESIDUAL    4106       240.629         0.059
```

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.48474)								
8+9 19	-0.27921	0.01876	221.5457		Q10	1	-0.02321	0.9679	2.2135
20+27 25	0.08447	0.01047	65.0351		Q32	2	0.09370	0.9851	36.3616
					Q55	3	-0.08546	0.6818	30.2031
					Q56	4	-0.03837	0.9636	6.0518
					Q12	5	0.07757	0.9602	24.8524
					Q13	6	0.07276	0.9533	21.8493

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Table 5-38. (Continued)

Q14	7	0.05866	0.9672	14.1724
Q15	8	0.00156	0.9982	0.0099
Q17	9	-0.08593	0.9025	30.5402
Q16	10	-0.01655	0.9872	1.1251
Q23	11	0.08358	0.8183	28.8781
Q26	12	-0.00633	0.7306	0.1644
Q27	13	-0.02161	0.6539	1.9179
Q28	14	0.02753	0.9581	3.1126
Q29	15	-0.00358	0.9710	0.0525
2+7	16	-0.05623	0.9994	13.0221
3X4	17	0.02660	0.9535	2.9073
5-6	18	0.08813	0.9993	32.1338
49+58	20	0.08613	0.9967	30.6821
14+15	22	0.03049	0.9965	3.8201
14+17	23	-0.02748	0.9795	3.1022
18+26	24	0.03349	0.2711	4.6096
21+24	26	-0.01839	0.9240	1.3885
22+25	27	0.04174	0.8828	7.1645
(E)	28	0.22655	0.7261	222.0900
(P)	29	0.10883	0.9736	49.1993
(F)	30	0.02290	0.9759	2.1547
(I)	31	0.04809	0.9866	9.5140
30+31	32	0.02172	0.9975	1.9376

STEP NUMBER 3
VARIABLE ENTERED 18

MULTIPLE R   0.2814
STD. ERROR OF EST.   0.2412

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	20.524	6.841	117.626
RESIDUAL	4105	238.760	0.058	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40378)			:	Q10 1	-0.00999	0.9456	0.4099
5+6 18	0.11631	0.02061	32.1338	:	Q32 2	0.09294	0.9849	35.7582
8+9 19	-0.27972	0.01869	224.3360	:	Q55 3	-0.08699	0.6817	31.2956
20+27 26	0.08289	0.01044	63.3437	:	Q56 4	-0.02674	0.9458	2.9360
				:	Q12 5	0.07302	0.9572	22.0016
				:	Q13 6	0.06968	0.9519	20.0229
				:	Q14 7	0.05640	0.7664	13.0971
				:	Q15 8	-0.00142	0.9971	0.0083
				:	Q17 9	-0.08633	0.9025	30.8188
				:	Q16 10	-0.02273	0.9826	2.1212
				:	Q23 11	0.07656	0.8123	24.1988
				:	Q26 12	-0.00925	0.7298	0.3508
				:	Q27 13	-0.02269	0.6539	2.1147
				:	Q28 14	0.02278	0.9552	2.1316
				:	Q29 15	.01015	0.9480	0.4231
				:	2+7 16	-0.06486	0.9910	17.3384
				:	3X4 17	0.02599	0.9535	2.7745
				:	49+58 20	0.07324	0.9711	22.1357
				:	14+15 22	0.02700	0.9948	2.9947
				:	14+17 23	-0.02930	0.9791	3.5262
				:	18+26 24	0.02875	0.2702	3.3950
				:	21+24 26	-0.02415	0.9203	2.3959
				:	22+25 27	0.03664	0.8796	5.5170
				:	(E) 28	0.21711	0.9076	203.0236
				:	(P) 29	0.10361	0.9693	44.5321
				:	(F) 30	0.01608	0.9698	1.0617
				:	(I) 31	0.05019	0.9861	10.3639
				:	30+31 32	0.01796	0.9956	1.3238

Table 5-38.   (Continued)

STEP NUMBER   4
VARIABLE ENTERED   3

MULTIPLE R   0.2935
STD. ERROR OF EST. 0.2403

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	22.331	5.583	96.694
RESIDUAL	4104	236.953	0.058	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.41635)							
Q55 3	-0.10049	0.01796	31.2956		Q10 1	-0.01690	0.9598	1.1725
5+6 18	0.11836	0.02053	33.2253		Q32 2	0.09329	0.9849	36.0214
8+9 19	-0.21076	0.02233	89.0891		Q56 4	-0.03685	0.9340	5.5779
20+27 25	0.07753	0.01044	55.1152		Q12 5	0.06636	0.9519	18.4774
					Q13 6	0.06105	0.9413	15.3478
					Q14 7	0.05937	0.9654	14.5110
					Q15 8	-0.00243	0.9969	0.0242
					Q17 9	-0.08445	0.9019	29.4703
					Q16 10	-0.02337	0.9826	2.2415
					Q23 11	0.07306	0.8113	22.5070
					Q26 12	-0.01122	0.7294	0.9169
					Q27 13	-0.02371	0.6538	2.3080
					Q28 14	0.02446	0.9549	2.4564
					Q29 15	0.00220	0.9400	0.0199
					2+7 16	-0.06077	0.9885	15.2071
					3X4 17	0.01892	0.9469	1.4695
					49+57 20	-0.07157	0.9706	21.1223
					14+15 22	0.02767	0.9948	3.1431
					14+17 23	-0.02590	0.9775	2.7549
					18+26 24	0.02501	0.2697	2.5671
					21+24 26	-0.02685	0.9195	2.9606
					22+25 27	0.03408	0.8787	4.7721
					(E) 28	0.20218	0.8462	174.8634
					(P) 29	0.09847	0.9651	40.1729
					(F) 30	0.01954	0.9684	1.5664
					(I) 31	0.04685	0.9845	9.0246
					30+31 32	0.01732	0.9955	1.2313

STEP NUMBER   5
VARIABLE ENTERED   20

MULTIPLE R   0.3013
STD. ERROR OF EST. 0.2397

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	23.545	4.709	81.959
RESIDUAL	4103	235.739	0.057	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.39569)							
Q55 3	-0.07862	0.01792	33.2777		Q10 1	-0.00961	0.9298	0.3789
5+6 18	0.10305	0.02375	24.6651		Q32 2	0.09336	0.9849	36.5680
8+9 19	-0.20894	0.02228	87.9578		Q56 4	-0.02941	0.9232	3.5505
49+58 20	0.11321	0.02463	21.1223		Q12 5	0.05935	0.9395	14.4997
20+27 25	0.07585	0.01042	52.9331		Q13 6	0.05427	0.9318	12.1184
					Q14 7	0.05540	0.9621	12.6262
					Q15 8	-0.00254	0.9969	0.0264
					Q17 9	-0.08567	0.9017	30.3252
					Q16 10	-0.03044	0.9735	3.8053
					Q23 11	0.07272	0.8110	21.8080
					Q26 12	-0.01520	0.7273	0.9477
					Q27 13	-0.02804	0.6515	3.2267
					Q28 14	0.01880	0.9487	1.4499
					Q29 15	0.01081	0.9268	0.4793
					2+7 16	-0.06114	0.9884	15.3896
					3X4 17	0.02394	0.9425	2.3522
					14+15 22	0.02557	0.9938	2.6830
					14+17 23	-0.02956	0.9751	3.5882
					18+26 24	0.02375	0.2696	2.3154
					21+24 26	-0.02937	0.9184	3.5421
					22+25 27	0.03011	0.8758	3.7222
					(E) 28	0.19139	0.8097	156.9816
					(P) 29	0.09098	0.9520	34.2354
					(F) 30	0.01849	0.9681	1.4030
					(I) 31	0.04486	0.9836	8.2703
					30+31 32	0.01486	0.9943	0.9066

Table 5-38.   (Continued)

STEP NUMBER   6
VARIABLE ENTERED   6

MULTIPLE R   0.3058
STD. ERROR OF EST.   0.2394

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	24.239	4.040	70.504
RESIDUAL	4102	235.345	0.057	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.38924)			.				
Q55 3	-0.09210	0.01800	25.1913	.	Q10 1	-0.00915	0.9298	0.3433
Q13 6	0.03687	0.01059	12.1184	.	Q32 2	0.09059	0.9818	33.9346
5+6 18	0.10134	0.02073	23.8958	.	Q56 4	-0.03035	0.9229	3.7822
8+9 19	-0.20699	0.02226	85.4955	.	Q12 5	0.03087	0.5128	3.9115
49+58 20	0.10457	0.02473	17.8859	.	Q14 7	0.04794	0.9409	9.4483
20+27 25	0.06268	0.01056	43.5354	.	Q15 8	-0.00103	0.9962	0.0043
				.	Q17 9	-0.07920	0.8854	25.8061
				.	Q16 10	-0.03292	0.9716	4.4483
				.	Q23 11	0.06970	0.8081	20.0192
				.	Q26 12	-0.01925	0.7234	1.5195
				.	Q27 13	-0.03191	0.6484	4.1805
				.	Q28 14	0.01749	0.9481	1.2555
				.	Q29 15	0.01153	0.9266	0.5453
				.	2+7 16	-0.05921	0.9870	14.4276
				.	3X4 17	0.00331	0.8029	0.0451
				.	14+15 22	0.02282	0.9912	2.1374
				.	14+17 23	-0.02929	0.9751	3.5211
				.	18+26 24	0.01035	0.2668	1.3811
				.	21+24 26	-0.03330	0.9139	4.5526
				.	22+25 27	0.02349	0.8619	2.2649
				.	(E) 28	0.18981	0.8077	153.2708
				.	(P) 29	0.08667	0.9453	31.1821
				.	(F) 30	0.01792	0.9680	1.3173
				.	(I) 31	0.02875	0.8788	3.3929
				.	30+31 32	0.01573	0.9941	1.0155

STEP NUMBER   7
VARIABLE ENTERED   10

MULTIPLE R   0.3074
STD. ERROR OF EST.   0.2393

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	24.494	3.499	61.118
RESIDUAL	4101	234.790	0.057	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40110)			.				
Q55 3	-0.09209	0.01799	25.2036	.	Q10 1	-0.01144	0.9254	0.5365
Q13 6	0.03786	0.01060	12.7607	.	Q32 2	0.09098	0.9817	34.2228
Q16 10	-0.02838	0.01346	4.4483	.	Q56 4	-0.03222	0.9202	4.2597
5+6 18	0.10359	0.02075	24.9270	.	Q12 5	0.03159	0.5125	4.0948
8+9 19	-0.20227	0.02236	81.8382	.	Q14 7	0.04837	0.9408	9.6149
49+58 20	0.10934	0.02482	19.4090	.	Q15 8	-0.00131	0.9961	0.0070
20+27 25	0.06931	0.01056	43.0997	.	Q17 9	-0.07893	0.8853	25.7057
				.	Q23 11	0.06856	0.8070	19.3652
				.	Q26 12	-0.01944	0.7233	1.5495
				.	Q27 13	-0.03150	0.6483	4.0728
				.	Q28 14	0.02309	0.9237	2.1869
				.	Q29 15	0.00735	0.9112	0.2215
				.	2+7 16	-0.05960	0.9869	14.6148
				.	3X4 17	0.00283	0.8028	0.0329
				.	14+15 22	0.02281	0.9912	2.1337
				.	14+17 23	-0.02881	0.9749	3.4061
				.	18+26 24	0.01668	0.2661	1.1406
				.	21+24 26	-0.03357	0.9138	4.6255
				.	22+25 27	0.02329	0.8619	2.2263
				.	(E) 28	0.19156	0.8061	156.1752
				.	(P) 29	0.08748	0.9450	31.6213
				.	(F) 30	0.01877	0.9674	1.4455
				.	(I) 31	0.03068	0.8759	3.8635
				.	30+31 32	0.01401	0.9912	0.8045

Table 5-38. (Continued)

STEP NUMBER   8
VARIABLE ENTERED   4

MULTIPLE R   0.3089
STD. ERROR OF EST. 0.2392

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	24.738	3.092	54.054
RESIDUAL	4100	234.546	0.057	

VARIABLES IN EQUATION				.	VARIABLES OT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TC REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.43134)			.					
Q55 3	-0.09630	0.01810	28.3141	.	Q10	1	0.01439	0.4953	0.8494
Q56 4	-0.03174	0.01538	4.2537	.	Q32	2	0.09096	0.9817	34.1934
Q13 6	0.03827	0.01060	13.0476	.	Q12	5	0.03119	0.5124	3.9922
Q16 10	-0.02990	0.01347	4.9257	.	Q14	7	-0.04907	0.9404	9.8952
5+6 18	0.09863	0.02088	22.3156	.	Q15	8	-0.00055	0.9955	0.0012
8+9 19	-0.20679	0.02246	84.7838	.	Q17	9	-0.07830	0.8849	25.2831
49+58 20	0.10402	0.02494	17.3935	.	Q23	11	0.06865	0.8070	19.4073
20+27 25	0.06884	0.01056	42.5274	.	Q26	12	-0.01935	0.7233	1.5354
				.	Q27	13	-0.03104	0.6482	3.9540
				.	Q28	14	0.02144	0.9211	1.8851
				.	Q29	15	0.02681	0.6881	2.9494
				.	2+7	16	-0.05912	0.9867	14.3761
				.	3X4	17	0.00435	0.8010	0.0776
				.	14+15 22		0.02377	0.9903	2.3165
				.	14+17 23		-0.02787	0.9740	3.1856
				.	18+26 24		0.01622	0.2661	1.0793
				.	21+24 26		-0.03386	0.9138	4.7039
				.	22+25 27		0.02281	0.8617	2.1332
				.	(E)	28	0.19397	0.8032	160.2460
				.	(P)	29	0.08571	0.9415	30.3361
				.	(F)	30	0.01672	0.9633	1.1456
				.	(I)	31	0.03117	0.8757	3.9873
				.	30+31 32		0.01296	0.9902	0.6886

STEP NUMBER   9
VARIABLE ENTERED   22

MULTIPLE R   0.3097
STD. ERROR OF EST. 0.2391

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	24.870	2.763	48.320
RESIDUAL	4099	234.414	0.057	

VARIABLES IN EQUATION				.	VARIABLES NOT IN EQUATION				
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.42545)			.					
Q55 3	-0.09673	0.01810	28.5736	.	Q10	1	0.01567	0.4939	1.0065
Q56 4	-0.03242	0.01538	4.4420	.	Q32	2	0.09151	0.9812	34.6058
Q13 6	0.03745	0.01061	12.4617	.	Q12	5	0.02929	0.5088	3.5193
Q16 10	-0.02991	0.01347	4.9320	.	Q14	7	0.04370	0.5860	7.4395
5+6 18	0.09744	0.02089	21.7559	.	Q15	8	-0.04370	0.2367	7.8399
8+9 19	-0.20696	0.02245	84.9587	.	Q17	9	-0.07828	0.8849	25.2675
49+58 20	0.10296	0.02495	17.3322	.	Q23	11	0.06687	0.8010	18.4383
14+15 22	0.02468	0.01621	2.3155	.	Q26	12	-0.01977	0.7231	1.6322
20+27 25	0.0805	0.01057	41.4791	.	Q27	13	-0.03167	0.6477	4.1137
				.	Q28	14	0.02054	0.9197	1.7295
				.	Q29	15	0.02761	0.6874	3.1255
				.	2+7	16	-0.06019	0.9849	14.9003
				.	3X4	17	0.00488	0.8006	0.0975
				.	14+17 23		-0.04081	0.8178	6.8355
				.	18+26 24		0.01614	0.2661	1.0677
				.	21+24 26		-0.03506	0.9116	5.0443
				.	22+25 27		0.02128	0.8579	1.8571
				.	(E)	28	0.19261	0.7952	157.8886
				.	(P)	29	0.08602	0.9413	30.5475
				.	(F)	30	0.01724	0.9628	1.2181
				.	(I)	31	0.03110	0.8757	3.9673
				.	30+31 32		0.01476	0.9847	0.8936

Table 5-38.   (Continued)

STEP NUMBER   10
VARIABLE ENTERED   27

MULTIPLE R   0.3104
STD. ERROR OF EST.   J.2391

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	24.976	2.498	43.683
RESIDUAL	4098	234.308	0.057	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.41493)							
Q55 3	-0.09625	0.01810	29.2830		Q10 1	0.01626	0.4935	1.0838
Q56 4	-0.03205	0.01538	4.3412		Q32 2	0.09056	0.9787	33.8813
Q13 5	0.03565	0.01069	11.1259		Q12 5	0.02705	0.5022	5.0007
Q16 10	-0.02978	0.01347	4.8883		Q14 7	0.04236	0.5833	7.3633
5+6 18	0.09619	0.02091	21.1646		Q15 8	-0.04236	0.2356	7.3633
8+9 19	-0.20606	0.02246	84.1697		Q17 9	-0.07629	0.8720	23.9851
49+58 20	0.10154	0.02497	15.5424		Q23 11	0.06466	0.7873	17.2036
14+15 22	0.02321	0.01625	2.0433		Q26 12	-0.02113	0.7204	1.8296
20+27 25	0.06349	0.01108	32.8224		Q27 13	-0.03278	0.5461	4.4069
22+25 27	0.02323	0.01705	1.8571		Q28 14	0.02127	0.9187	1.8552
					Q29 15	0.02802	0.6872	3.2199
					2+7 16	-0.06033	0.9849	14.9671
					3X4 17	0.00405	0.7994	0.0672
					14+17 23	-0.03957	0.8147	6.4240
					18+26 24	0.01344	0.2614	0.7400
					21+24 26	-0.07444	0.4223	22.8287
					(E) 28	0.19269	0.7952	157.9873
					(P) 29	0.08539	0.9403	30.0926
					(F) 30	0.0171C	0.9628	1.1984
					(I) 31	0.03058	0.8752	3.8360
					30+31 32	0.01334	0.9801	0.7295

STEP NUMBER   11
VARIABLE ENTERED   1

MULTIPLE R   0.3108
STD. ERROR OF EST.   0.2391

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	11	25.038	2.276	39.811
RESIDUAL	4097	234.246	0.057	

VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE		VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40744)							
Q10 1	0.02222	0.02135	1.0838		Q32 2	0.09013	0.9778	33.5498
Q55 3	-0.09615	0.01810	23.2219		Q12 5	0.02769	0.5015	3.1431
Q56 4	-0.04700	0.02105	4.9876		Q14 7	0.04224	0.5832	7.3224
Q13 6	0.03587	0.01069	11.2574		Q15 8	-0.04224	0.2356	7.3223
Q16 10	-0.02317	0.01348	4.6878		Q17 9	-0.07649	0.8719	24.1063
5+6 18	0.09767	0.02296	21.7222		Q23 11	0.06479	0.7873	17.2660
8+9 19	-0.20483	0.02249	82.9376		Q26 12	-0.02151	0.7200	1.8958
49+58 20	0.10236	0.02498	15.7917		Q27 13	-0.03323	0.6457	4.5275
14+15 22	0.02457	0.01627	2.1855		Q28 14	0.02114	0.9186	1.8309
20+27 25	0.06318	0.01109	32.4729		Q29 15	0.02377	0.5986	2.3162
22+25 27	0.02372	0.01706	1.9342		2+7 16	-0.06027	0.9849	14.9360
					3X4 17	0.00435	0.7991	0.0776
					14+17 23	-0.03980	0.8145	6.4976
					18+26 24	0.01367	0.2613	0.7656
					21+24 26	-0.07466	0.4223	22.9569
					(E) 28	0.19361	0.7937	159.5119
					(P) 29	0.08541	0.9403	30.1029
					(F) 30	0.01688	0.9626	1.1671
					(I) 31	0.03009	0.8743	3.7111
					30+31 32	0.01367	0.9797	0.7651

Table 5-38.   (Continued)

STEP NUMBER   12
VARIABLE ENTERED   17

MULTIPLE R   0.3108
STD. ERROR OF EST.   0.2391

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	12	25.043	2.087	36.492
RESIDUAL	4096	234.241	0.057	

VARIABLES IN EQUATION				VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.40664)						
Q10 1	0.02233	0.02135	1.0939	Q32 2	0.09015	0.9778	33.5528
Q55 3	-0.09594	0.01812	28.0445	Q12 5	0.02748	0.4997	3.0946
Q56 4	-0.04729	0.02107	5.0347	Q14 7	0.04233	0.5830	7.3508
Q13 6	0.03465	0.01155	8.9957	Q15 8	-0.04233	0.2355	7.3507
Q16 10	-0.02913	0.01348	4.6658	Q17 9	-0.07651	0.0719	24.1098
3X4 17	0.00643	0.02308	0.0776	Q23 11	0.06494	0.7866	17.3439
5+6 18	0.09758	0.02096	21.6739	Q26 12	-0.02154	0.7200	1.9009
8+9 19	-0.20418	0.02262	81.5074	Q27 13	-0.03326	0.6456	4.5340
49+58 20	0.10312	0.02513	16.8359	Q28 14	0.02101	0.9177	1.8090
14+15 22	0.02418	0.01628	2.2076	Q29 15	0.02379	0.5986	2.3187
20+27 25	0.06313	0.01109	32.4157	2+7 16	-0.06114	0.9727	15.3630
22+25 27	0.02354	0.01707	1.9012	14+17 23	-0.03977	0.8143	6.4856
				18+26 24	0.01358	0.2612	0.7555
				21+24 26	-0.07476	0.4221	23.0169
				(E) 28	0.19365	0.7936	159.5525
				(P) 29	08549	0.9401	35.1479
				(F) 30	0.01692	0.9625	1.1727
				(I) 31	0.03023	0.8735	3.7463
				30+31 32	0.01351	0.9783	0.7475

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED REMOVED		MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	8+9	19	0.2393	0.0573	0.0573	249.4064	1
2	20+27	25	0.2682	0.0719	0.0147	65.0351	2
3	5+6	18	0.2814	0.0792	0.0072	32.1338	3
4	Q55	3	0.2935	0.0861	0.0070	31.2956	4
5	49+58	20	0.3013	0.0908	0.0047	21.1223	5
6	Q13	6	0.3058	0.0935	0.0027	12.1184	6
7	Q16	10	0.3074	0.0945	0.0010	4.4483	7
8	Q56	4	0.3087	0.0954	0.0009	4.2597	8
9	14+15	22	0.3097	0.0959	0.0005	2.3165	9
10	22+25	27	0.3104	0.0963	0.0004	1.8571	10
11	Q10	1	0.3103	0.0966	0.0002	1.0838	11
12	3X4	17	0.3108	0.0966	0.0000	0.0776	12

Table 5-39. Interviewer's Assessment of Task Creativity

```
SUB-PROBLM   12
DEPENDENT VARIABLE        Q63
MAXIMUM NUMBER OF STEPS     28
F-LEVEL FOR INCLUSION     0.000000
F-LEVEL FOR DELETION      0.000000
TOLERANCE LEVEL           0.001000


STEP NUMBER   1
VARIABLE ENTERED   11

MULTIPLE R          0.2858
STD. ERROR OF EST.  0.3092

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION    1        12.622        12.622     132.047
        RESIDUAL   1485       141.948         0.096
```

	VARIABLES IN EQUATION			.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.83211)			.				
R+9 11	-0.45314	0.03943	132.0470	.	Q10 1	-0.03051	0.9687	1.3929
				.	Q48 2	0.05604	0.9978	4.6750
				.	Q55 3	-0.12749	0.6898	24.5183
				.	Q56 4	-0.01185	0.9645	0.2085
				.	Q50A 6	0.15210	0.9309	35.1422
				.	Q50C 7	0.04378	0.9840	2.8494
				.	2+7 8	-0.01384	0.9996	0.2843
				.	3X4 9	0.14620	0.9583	32.4103
				.	5+6 10	0.08883	0.9999	11.8019
				.	49+58 12	0.15189	0.9993	35.0452
				.	51+52 13	0.08860	0.9999	11.7417
				.	(F) 14	-0.02515	0.9770	0.9389

```
STEP NUMBER   2
VARIABLE ENTERED   6

MULTIPLE R          0.3208
STD. ERROR OF EST.  0.3057

ANALYSIS OF VARIANCE
                    DF   SUM OF SQUARES   MEAN SQUARE   F RATIO
        REGRESSION    2        15.906         7.953      85.113
        RESIDUAL   1484       138.665         0.093
```

	VARIABLES IN EQUATION			.	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.70868)			.				
Q50A 6	0.18007	0.03038	35.1422	.	Q10 1	-0.02939	0.9686	1.2822
R+9 11	-0.39018	0.04041	93.2392	.	Q48 2	0.06012	0.9974	5.3800
				.	Q55 3	-0.08614	0.6256	11.0868
				.	Q56 4	-0.01714	0.9635	0.4357
				.	Q50C 7	-0.04006	0.7266	2.3840
				.	2+7 8	-0.00388	0.9953	0.0223
				.	3X4 9	0.13398	0.9498	27.1067
				.	5+6 10	0.07548	0.9908	8.4983
				.	49+58 12	0.12001	0.9408	21.6701
				.	51+52 13	0.10376	0.9919	16.1388
				.	(F) 14	-0.02054	0.9760	0.6261

Table 5-39. (Continued)

STEP NUMBER 3
VARIABLE ENTERED 9

MULTIPLE R   0.3459
STD. ERROR OF EST.   0.3030

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	3	18.395	6.132	66.775
RESIDUAL	1483	136.176	0.092	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.67097)		
Q50A 6	0.16519	0.03025	29.8273
3X4 9	0.23571	0.04527	27.1067
8+9 11	-0.35324	0.04068	75.3983

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10	1	-0.03196	0.7683	1.5155
Q48	2	0.05871	0.9971	5.1254
Q55	3	-0.07799	0.6228	9.0703
Q56	4	-0.02409	0.9611	0.8608
Q50C	7	-0.04004	0.7265	2.3705
2+7	8	-0.01549	0.9881	0.3558
5+6	10	0.07527	0.9907	8.4432
49+58	12	0.13183	0.9353	26.2134
51+52	13	0.10180	0.9915	15.5182
(F)	14	-0.01993	0.9760	0.5892

STEP NUMBER 4
VARIABLE ENTERED 12

MULTIPLE R   0.3665
STD. ERROR OF EST.   0.3005

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	4	20.762	5.190	57.486
RESIDUAL	1482	133.809	0.090	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.62042)		
Q50A 6	0.12584	0.03096	16.5190
3X4 9	0.25336	0.04503	31.6628
8+9 11	-0.35861	0.04035	78.9759
49+58 12	0.26235	0.05124	26.2134

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10	1	-0.01722	0.9558	0.4392
Q48	2	0.01145	0.8642	0.1940
Q55	3	-0.08303	0.6221	10.2818
Q56	4	-0.00707	0.9448	0.0740
Q50C	7	-0.03145	0.7232	1.4662
2+7	8	-0.02097	0.9865	0.6518
5+6	10	0.05706	0.9695	4.8368
51+52	13	0.05804	0.8587	5.0067
(F)	14	-0.02484	0.9747	0.9146

STEP NUMBER 5
VARIABLE ENTERED 3

MULTIPLE R   0.3745
STD. ERROR OF EST.   0.2995

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	5	21.684	4.337	48.334
RESIDUAL	1481	132.886	0.090	

VARIABLES IN EQUATION

VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE
(CONSTANT	0.65397)		
Q55 3	-0.12502	0.03899	10.2818
Q50A 6	0.09499	0.03233	8.6323
3X4 9	0.24402	0.04498	29.4318
8+9 11	-0.28446	0.04640	37.5827
49+58 12	0.26766	0.05111	27.4273

VARIABLES NOT IN EQUATION

VARIABLE		PARTIAL CORR.	TOLERANCE	F TO ENTER
Q10	1	-0.02416	0.9494	0.8645
Q48	2	0.01326	0.8638	0.2604
Q56	4	-0.01527	0.9359	0.3453
Q50C	7	-0.03262	0.7231	1.5768
2+7	8	-0.01851	0.9956	0.5072
5+6	10	0.06035	0.9682	5.4104
51+52	13	0.05932	0.8585	5.2265
(F)	14	-0.02187	0.9734	0.7079

Table 5-39. (Continued)

STEP NUMBER   6
VARIABLE ENTERED   10

MULTIPLE R   0.3787
STD. ERROR OF EST.   0.2991

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	6	22.168	3.695	41.300
RESIDUAL	1480	132.402	0.089	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.59289)			:				
055 3	-0.12834	0.03896	10.8539	:	010 1	-0.01635	0.9328	0.3954
050A 6	0.09012	0.03235	7.7612	:	048 2	0.01202	0.8634	0.2138
3X4 9	0.24188	0.04492	28.9926	:	056 4	-0.00870	0.9245	0.1120
5+6 10	0.10010	0.04303	5.4104	:	050C 7	-0.02841	0.7193	1.1944
8+9 11	-0.28527	0.04633	37.9088	:	2+7 8	-0.02426	0.9771	0.8707
49+58 12	0.25022	0.05158	23.5316	:	51+52 13	0.06027	0.8584	5.3929
				:	(F) 14	-0.02567	0.9697	0.9751

STEP NUMBER   7
VARIABLE ENTERED   7

MULTIPLE R   0.3796
STD. ERROR OF EST.   0.2991

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	7	22.275	3.182	35.575
RESIDUAL	1479	132.296	0.089	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.60260)			:				
055 3	-0.12877	0.03896	10.9273	:	010 1	-0.00846	0.8578	0.1107
050A 6	0.11016	0.03718	8.7774	:	048 2	0.00764	0.8419	0.0862
050C 7	-0.03266	0.02989	1.1944	:	056 4	0.00061	0.8260	0.0005
3X4 9	0.24152	0.04492	28.9075	:	2+7 8	-0.02325	0.9758	0.7995
5+6 10	0.09670	0.04314	5.0244	:	51+52 13	0.05805	0.8519	4.9977
8+9 11	-0.28429	0.04634	37.6375	:	(F) 14	-0.02707	0.9675	1.0838
49+58 12	0.24703	0.05166	22.8670	:				

STEP NUMBER   8
VARIABLE ENTERED   8

MULTIPLE R   0.3802
STD. ERROR OF EST.   0.2991

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	8	22.347	2.793	31.224
RESIDUAL	1478	132.224	0.089	

VARIABLES IN EQUATION				:	VARIABLES NOT IN EQUATION			
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	:	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT	0.61809)			:				
055 3	-0.12781	0.03897	10.7548	:	010 1	-0.00858	0.8578	0.1087
050A 6	0.10739	0.03732	8.2830	:	048 2	0.00730	0.8417	0.0788
050C 7	-0.03169	0.02991	1.1229	:	056 4	0.00045	0.8259	0.0003
2+7 8	-0.03929	0.04394	0.7995	:	51+52 13	0.05680	0.8499	4.7805
3X4 9	0.24510	0.04510	29.5318	:	(F) 14	-0.02640	0.9667	1.0303
5+6 10	0.10039	0.04334	5.3652	:				
8+9 11	-0.28444	0.04634	37.6736	:				
49+58 12	0.24830	0.05168	23.0809	:				

Table 5-39. (Continued)

STEP NUMBER   9
VARIABLE ENTERED   1

MULTIPLE R   0.3803
STD. ERROR OF EST.   0.2997

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	9	22.356	2.484	27.750
RESIDUAL	1477	132.214	0.090	

	VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.62744			.				
Q10 1	-0.01110	0.03365	0.1087	.	Q48 2	0.00707	0.8410	0.0737
Q55 3	-0.12881	0.03910	10.8516	.	Q56 4	0.00703	0.4818	0.0906
Q50A 6	0.10562	0.03775	7.8471	.	51+52 13	0.05645	0.8469	4.7183
Q50C 7	-0.02978	0.03119	0.8512	.	(F) 14	-0.02654	0.9464	1.0404
2+7 8	-0.03924	0.04396	0.7972	.				
3X4 9	0.24521	0.04512	29.5434	.				
5+6 10	0.09072	0.04365	5.1139	.				
8+9 11	-0.29622	0.04667	37.6160	.				
49+58 12	0.24694	0.05186	22.6705	.				

STEP NUMBER   10
VARIABLE ENTERED   4

MULTIPLE R   0.3804
STD. ERROR OF EST.   0.2993

ANALYSIS OF VARIANCE

	DF	SUM OF SQUARES	MEAN SQUARE	F RATIO
REGRESSION	10	22.364	2.236	24.969
RESIDUAL	1476	132.206	0.090	

	VARIABLES IN EQUATION					VARIABLES NOT IN EQUATION		
VARIABLE	COEFFICIENT	STD. ERROR	F TO REMOVE	.	VARIABLE	PARTIAL CORR.	TOLERANCE	F TO ENTER
(CONSTANT)	0.62408			.				
Q10 1	-0.01966	0.04409	0.1989	.	Q48 2	0.00740	0.8396	0.0807
Q55 3	-0.12811	0.03918	10.6895	.	51+52 13	0.05659	0.8467	4.7384
Q56 4	0.01332	0.04424	0.0906	.	(F) 14	-0.02603	0.9612	1.0004
Q50A 6	0.10627	0.03779	7.9101	.				
Q50C 7	-0.03060	0.03179	0.9270	.				
2+7 8	-0.03909	0.04397	0.7900	.				
3X4 9	0.24456	0.04518	29.2977	.				
5+6 10	0.09897	0.04367	5.1356	.				
8+9 11	-0.28566	0.04672	37.3890	.				
49+58 12	0.24789	0.05198	22.7470	.				

F-LEVEL INSUFFICIENT FOR FURTHER COMPUTATION

SUMMARY TABLE

STEP NUMBER	VARIABLE ENTERED	REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ	F VALUE TO ENTER OR REMOVE	NUMBER OF INDEPENDENT VARIABLES INCLUDED
1	8+9	11	0.2858	0.0817	0.0817	132.0470	1
2	Q50A	6	0.3208	0.1029	0.0212	35.1422	2
3	3X4	9	0.3450	0.1190	0.0161	27.1067	3
4	49+58	12	0.3665	0.1343	0.0153	26.2134	4
5	Q55	3	0.3745	0.1403	0.0060	10.7618	5
6	5+6	10	0.3787	0.1434	0.0031	5.4104	6
7	Q50C	7	0.3796	0.1441	0.0007	1.1945	7
8	2+7	8	0.3802	0.1446	0.0005	0.7995	8
9	Q10	1	0.3803	0.1446	0.0001	0.1087	9
10	Q55	4	0.3804	0.1447	0.0001	0.0906	10

6. COMPARISON OF PHASE I AND PHASE II DISTRIBUTIONS

6.1 INTERPRETATION

Each table presents an abbreviated form of the Phase II question and six columns of information consisting of:

1. The responses to the question are arranged in order according to the detailed structure. That order is expressed in Roman numerals. If there are no Roman numerals, the original response order is used. If the same Roman numeral appears with more than one response, no distinction is made between these responses in the analysis.

2. The description is the one that originally appeared in the Interview Guide or one that is indicative of the grouped answers.

3. The "I" column contains the one-way frequency distribution of Phase I answers to the question.

4. The "I' (I Prime)" column contains the one-way frequency distribution of Phase I answers to the question, which has been adjusted to the Phase II sample size.

5. The "II" column contains the corresponding one-way frequency distribution of Phase II answers to the question.

6. The "J^2 Contribution" column contains the respective contributions to a statistic, J^2, which is a Chi-square-type statistic. It is discussed in Section 4 of Volume II. During publication, it was discovered that $2J^2$ is approximately distributed as Chi-square (X^2). * The quantities, $X^2 \approx 2J^2$, the degrees of freedom (df) for X^2 and the range for the probability (α) of X^2 being exceeded, were then added to each table.

---

* If I_j represents the number of Phase I answers in the (modified) j^{th} question-response category, I_j' represents the adjustment of I_j to the Phase II (modified) sample size, II_j represents the number of Phase II answers in the (modified) j^{th} question-response category, λ represents the ratio of the (modified) Phase II and Phase I sample sizes, and m represents the number of (modified) question response categories, then:

$$\lambda \approx 1500/1375 \approx 1$$

$$I_j' = \lambda I_j$$

$$J^2 = 1/2 \sum_{j=1}^{m} (II_j - I_j')^2/(II_j + I_j')$$

$$X^2 = \sum_{j=1}^{m} (II_j - I_j')^2/(\lambda II_j + I_j') \approx 2J^2 \text{ and}$$

$$df = m-1$$

6.2 INDEX

Either of the following two indices may be used to locate the Phase I and Phase II comparison tables:

First Index: Sequenced by Phase II Question

Second Index: Sequenced by Phase I Question

First Index:	Sequenced by Phase II Question			
Phase II Question	Corresponding Phase I Question(s)	Description	Table	Page
2	15/16	Task Initiator	6-1	6-7
4	18	Percentage of Time on Task	6-2	6-7
5	20	Type of Task	6-3	6-8
6A	21	Formality of Task (Oral, Written)	6-4	6-8
6B	22	Formality of Task	6-5	6-8
7	23	Task Recipient	6-6	6-9
8	94	Class of Task	6-7	6-9
9	14	Kind of Task	6-8	6-10
10	12	Field of Task	6-9	6-11
12	35	Actual Acquisition Time for Information	6-10	6-14
13	36	Desired Acquisition Time for Information	6-11	6-14
14	42	Location of First Source for Information	6-12	6-15
15	43	Why First Source Used	6-13	6-16
18	28	Actual Composition of Transporting Medium	6-14	6-17
19	29	Usual Composition of Transporting Medium	6-15	6-18

	First Index: Sequenced by Phase II Question (Cont'd)			
Phase II Question	Corresponding Phase I Question(s)	Description	Table	Page
21	32	Actual Volume of Transporting Medium	6-16	6-19
22	33	Desired Volume of Transporting Medium	6-17	6-19
24	38	Actual Detail of Transporting Medium	6-18	6-20
25	39	Desired Detail of Transporting Medium	6-19	6-20
28	25	Class of Information	6-20	6-21
29	26	Field of Information	6-21	6-22
30	46	Essentiality of Information t. Task	6-22	6-25
31	47	Extensiveness of Information Use in Task	6-23	6-25
32	48	Discovery of Information Available, but Unknown, during Task	6-24	6-25
37	49	Use of Technical Abstract Bulletin (TAB)	6-25	6-26
39	50/51	Use of Defense Documentation Center (DDC)	6-26	6-26
40	52/53	Use of DOD Specialized Information Centers	6-27	6-26
44	54	Use of English Abstracts or Translations	6-28	6-27
45	56	Encounter of Difficulties	6-29	6-27
48	2	User's Year of Birth/Age	6-30	6-27
49	3	Number of Personnel Supervised by User	6-31	6-28
50A	4	User's Highest Degree	6-32	6-28
50B	5	Year of User's Highest Degree	6-33	6-29

		First Index: Sequenced by Phase II Question (Cont'd)		
Phase II Question	Corresponding Phase I Question(s)	Description	Table	Page
50C	4	Field of User's Highest Degree	6-34	6-29
51	8	Job Experience of User	6-35	6-30
54	9	Type of Work Activity	6-36	6-30
55	10	Kind of Work Position	6-37	6-31
56	11	Field of Work Position	6-38	6-32
58	1	User's Equivalent Government Service (GS) Rating	6-39	6-34
59	59	Interviewer's Assessment of User's Information Needs	6-40	6-34

Second Index: Sequenced by Phase I Question				
Phase I Question(s)	Corresponding Phase II Question	Description	Table	Page
1	58	User's Equivalent Government Service (GS) Rating	6-29	6-34
2	48	User's Year of Birth/Age	6-30	6-27
3	49	Number of Personnel Supervised by User	6-31	6-28
4	50A	User's Highest Degree	6-32	6-28
4	50C	Field of User's Highest Degree	6-34	6-29
5	50B	Year of User's Highest Degree	6-33	6-29
8	51	Job Experience of User	6-35	6-30
9	54	Type of Work Activity	6-36	6-30
10	55	Kind of Work Position	6-37	6-31
11	56	Field of Work Position	6-38	6-32
12	10	Field of Task	6-9	6-11
14	9	Kind of Task	6-8	6-10
15/16	2	Task Initiator	6-1	6-7
18	4	Percentage of Time on Task	6-2	6-7
20	5	Type of Task	6-3	6-8
21	6A	Formality of Task (Oral, Written)	6-4	6-8
22	6B	Formality of Task	6-5	6-8
23	7	Task Recipient	6-6	6-9
25	28	Class of Information	6-20	6-21
26	29	Field of Information	6-21	6-22
28	18	Actual Composition of Transporting Medium	6-14	6-17
29	19	Usual Composition of Transporting Medium	6-15	6-18

Second Index: Sequenced by Phase I Question (Cont'd)				
Phase I Question(s)	Corresponding Phase II Question	Description	Table	Page
32	21	Actual Volume of Transporting Medium	6-16	6-19
33	22	Desired Volume of Transporting Medium	6-17	6-19
35	12	Actual Acquisition Time for Information	6-10	6-14
36	13	Desired Acquisition Time for Information	6-11	6-14
38	24	Actual Detail of Transporting Medium	6-18	6-20
39	25	Desired Detail of Transporting Medium	6-19	6-20
42	14	Location of First Source for Information	6-12	6-15
43	15	Why First Source Used	6-13	6-13
46	30	Essentiality of Information to Task	6-22	6-25
47	31	Extensiveness of Information Use in Task	6-23	6-25
48	32	Discovery of Information Available but Unknown, during Task	6-24	6-25
49	37	Use of Technical Abstract Bulletin (TAB)	6-25	6-26
50/51	39	Use of Defense Documentation Center (DDC)	6-26	6-26
52/53	40	Use of DOD Specialized Information Centers	6-27	6-26
54	44	Use of English Abstracts or Translations	6-28	6-27
56	45	Encounter of Difficulties	6-29	6-27
59	59	Interviewer's Assessment of User's Information Needs	6-40	6-34
94	8	Class of Task	6-7	6-9

6.3 COMPARISONS

Table 6-1
Task Initiator (I-Q15/Q16 vs II-Q2)

Order	Description	I	I'	II	J^2 Contribution
I	Self-Generated	507	575	204	88.34
II	Joint Decision	107	121	120	0.00
III	Assigned	709	804	176	34.95
	TOTAL	1,323	1,500	1,500	123.29

$J^2 = 123.29$, $X^2 \approx 246.58$, df = 2, $\alpha < 0.0005$

Table 6-2
Percentage of Time on Task (I-Q18 vs II-Q4)

Order	Phase I	Phase 2	I	I'	II	J^2 Contribution
I	20% or less	25% or less	347	386	330	2.19
II	21-40%	25-49%	277	308	273	1.74
III	41-60%	50-74%	268	299	318	0.29
IV	61-80	75-99%	211	235	251	0.26
V	81-100%	Full Time	243	271	328	2.71
	TOTAL		1,346	1,499	1,500	7.19

$J^2 = 7.19$, $X^2 \approx 14.38$, df = 4, $0.005 < \alpha < 0.01$

Table 6-3
Type of Task (I-Q20 vs II-Q5)

Order	Description	I	I'	II	J^2 Contribution
I	Finding	573	647	556	4.24
II	Recommendation	500	565	661	3.76
III	Decision	251	283	278	0.00
	TOTAL	1,324	1,495	1,495	8.00

$J^2 = 8.0$, $\chi^2 \approx 16.0$, df = 2, $\alpha < 0.0005$

Table 6-4
Formality of Task (Oral, Written) (I-Q21 vs II-Q6A)

Order	Description	I	I'	II	J^2 Contribution
I	Oral	286	348	163	33.48
II	Written	935	1,136	1,321	6.96
	TOTAL	1,221	1,484	1,484	40.44

$J^2 = 40.44$, $\chi^2 \approx 80.88$, df = 1, $\alpha < 0.0005$

Table 6-5
Formality of Task (I-Q22 vs II-Q6B)

Order	Description	I	I'	II	J^2 Contribution
I	Formal	800	900	1,070	7.33
II	Informal	532	599	429	14.06
	TOTAL	1,332	1,499	1,499	21.39

$J^2 = 21.39$, $\chi^2 \approx 42.78$, df = 1, $\alpha < 0.0005$

Table 6-6
Task Recipient (I-Q23 vs II-Q7)

Order	Description	I	I'	II	J^2 Contribution
I	To or within DOD or Company	1,154	1,288	912	32.13
II	Outside DOD or Company	187	209	585	89.03
	TOTAL	1,341	1,497	1,497	121.16

$J^2 = 121.16$, $X^2 \approx 242.32$, df $= 1$, $\alpha < 0.0005$

Table 6-7
Class of Task (I-Q94 vs II-Q8)

Order	Description	I	I'	II	J^2 Contribution
I	Concepts	46	53	129	15.87
II	Cost and funding; administrative action	137	158	56	24.31
III	Designs or design techniques	211	243	362	11.70
IV	Experimental processes and procedures	63	73	75	0.01
V	Mathematical aids and formulae; computer programs	94	108	94	0.49
VI	Performance and characteristics	239	276	241	1.18
VII	Production processes and procedures	22	25	89	17.96
VIII	Raw data	34	39	24	1.79
IX	Specifications	68	78	93	0.66
X	Technical status	63	73	57	0.98
XI	Test processes and procedures	66	76	86	0.31
XII	Utilization	23	26	53	4.61
XIII	Evaluation	234	270	141	20.24
	TOTAL	1,300	1,498	1,500	100.11

$J^2 = 100.11$, $X^2 \approx 200.22$, df $= 12$, $\alpha < 0.0005$

Table 6-8
Kind of Task (I-Q14 vs II-Q9)

Order	Description	I	I'	II	J^2 Contribution
A	Research (explora-tory development; basic and applied)	329	348	476	9.94
B	Advanced development	113	119	147	1.47
C	Engineering development	174	184	188	0.00
D	Operational (system) development	243	257	163	10.52
E	Reliability or quality control	62	65	69	0.00
F	R&D support (test or evaluation)	357	377	308	3.47
	TOTAL	1,278	1,350	1,351	25.40

$J^2 = 25.40$, $X^2 \approx 50.80$, df = 5, $\alpha < 0.0005$

Table 6-9
Field of Task (I-Q12 vs II-Q10)

Order	Description	I	I'	II	J^2 Contribution
I	Production, Management and Social Science	64	71	143	12.11
	Miscellaneous arts and sciences	11	12	10	0.09
	Personnel and training	10	11	14	0.18
	Production and management	30	33	102	17.63
	Psychology and human engineering	13	15	17	0.06
II	Medical Sciences	80	89	33	12.85
	Medical sciences	80	89	33	12.85
III	Mechanical, Industrial, Civil and Marine Engineering	111	123	181	1.94
	Ground transportation equipment	6	7	94	0.00
	Installations and constructions	21	23	36	1.43
	Military sciences and operations	22	25	21	0.17
	Photography and other reproductive processes	12	13	7	0.90
	Quartermaster equipment and supplies	9	10	0	5.00
	Ships and marine equipment	38	42	18	4.80
	Transportation	3	3	5	0.25

Table 6-9. (Cont)

Order	Description	I	I'	II	J^2 Contribution
IV	Aeronautics and Space Technology	197	218	351	15.54
	Aircraft and flight equipment	77	85	197	22.24
	Guided missiles	101	112	128	0.53
	Navigation	19	21	26	0.27
V	Electronics and Electrical Engineering	284	315	354	1.14
	Communications	70	78	35	8.16
	Detection	60	67	35	5.02
	Electrical equipment	21	23	29	0.35
	Electronics, electronic equipment	133	147	255	14.51
VI	Chemical Sciences and Material	235	260	181	7.08
	Chemical warfare equipment and materials	16	18	2	6.40
	Chemistry	26	29	66	7.21
	Fuels and combustion	21	23	9	3.06
	Materials (non-metallic)	33	36	56	2.17
	Metallurgy	16	18	35	2.73
	Ordnance	123	136	13	50.77

Table 6-9.   (Cont)

Order	Description	I	I'	II	J^2 Contribution
VII	Physical Science	135	150	193	2.70
	Astronomy, geo-physics and geography	26	29	13	3.05
	Fluid mechanics	14	16	44	6.53
	Nuclear physics and nuclear chemistry	29	32	8	7.20
	Nuclear propulsion	1	1	3	0.50
	Physics	42	47	51	0.08
	Propulsion systems	23	25	74	12.13
VIII	Research and Research Equip-ment (includes computer oriented fields)	215	238	131	15.51
	Research and research equipment	215	238	131	15.51
IX	Mathematics	27	30	14	2.91
	Mathematics	27	30	14	2.91
	TOTAL	1,348	1,494	1,494 214.71	71.78

Ungrouped: J^2 = 214.71, $\chi^2 \approx$ 429.42, df = 32, α <0.0005

Grouped: J^2 = 71.78, $\chi^2 \approx$ 143.56, df = 8, α <0.0005

Table 6-10
Actual Acquisition Time for Information (I-Q35 vs II-Q12)

Order	Description	I	I'	II	J^2 Contribution
I	Blank - Recall	802	986	618	38.19
II	Less than 1 day	1,904	2,342	1,534	84.22
III	1-7 days	735	904	1,203	21.22
IV	8-30 days	492	605	1,007	50.13
V	More than 1 month	403	496	971	76.90
	TOTAL	4,336	5,333	5,333	270.66

$J^2 = 270.66$, $\chi^2 \approx 541.32$, df $= 4$, $\alpha < 0.0005$

Table 6-11
Desired Acquisition Time for Information (I-Q36 vs II-Q13)

Order	Description	I	I'	II	J^2 Contribution
I	Blank - Recall	807	923	382	112.14
II	Less than 1 day	829	948	833	3.71
III	1-7 days	998	1,141	1,339	7.90
IV	8-30 days	329	948	1,387	46.68
V	Over 1 month	1,124	1,399	1,387	0.03
	TOTAL	4,017	5,359	5,359	170.46

$J^2 = 170.46$, $\chi^2 \approx 340.92$, df $= 4$, $\alpha < 0.0005$

Table 6-12
Location of First Source for Information (I-Q42 vs II-Q14)

Order	Description	I	I'	II	J^2 Contribution
I	Received w/task	496	578	576	0.00
II	Blank-Recall	786	915	1,009	2.30
III	Searched own collection	820	955	695	20.48
IV	Assigned to subordinate	175	204	236	1.16
V	Asked colleague	972	1,132	1,276	4.31
VI	Asked supervisor	93	108	72	3.60
VII	Department files	608	708	297	84.04
VIII	Requested library search	243	283	526	36.50
IX	Manufacturer, vendor supplier	215	250	320	4.30
X	External consultant (includes customer)	55	64	146	16.01
XI	DOD Information Center	19	22	67	11.38
	TOTAL	4,482	5,219	5,220	184.08

$$J^2 = 184.08, \quad X^2 \approx 368.16, \quad df = 10, \quad \alpha < 0.0005$$

Table 6-13
Why First Source Used (I-Q43 vs II-Q15)

Order	Description	I	I'	II	J^2 Contribution
I	Received w/task assignment	534	784	580	15.26
II	Available, handy, easy to use	702	1,031	1,426	31.75
III	Found helpful previously	301	442	368	3.38
IV	Most authoritative	806	1,184	1,194	0.02
V	Only source known	180	264	508	38.56
VI	Recalled or was told of source	1,119	1,644	1,274	23.46
	TOTAL	3,642	5,349	5,350	112.43

$$J^2 = 112.43, \; \chi^2 \approx 224.86, \; df = 5, \; \alpha < 0.0005$$

Table 6-14
Actual Composition of Transporting Medium (I-Q28 vs II-Q18)

Order	Description	I	I'	II	J^2 Contribution
I	Previous knowledge	830	1,183	1,485	17.0:
II	Meetings and symposia	80	114	209	13.97
III	Oral contacts – all other	1,855	2,644	2,269	14.31
IV	Oral contacts with manufacturers	341	486	425	2.04
V	Live demonstrations	49	70	90	1.25
VI	Physical measurement or experiment	155	221	298	5.71
VII	Personal notes, logs and files	189	269	370	7.98
VIII	Correspondence, memos, and TWX	445	634	676	0.67
IX	Drawings and schematics	248	353	571	25.72
X	Photographs, maps and files	60	86	28	14.75
XI	Part lists	19	27	54	4.50
XII	Computer printout	82	117	160	3.34
XIII	Microfilm or microfiche				0.00
XIV	Slides or motion pictures				0.00
XV	System specification document	119	170	471	70.67
XVI	Newsletters and other mass media	37	53	41	0.77
XVII	Brochures	150	214	211	0.01

Table 6-14 (Cont)

Order	Description	I	I'	II	J^2 Contribution
XVIII	Catalogs	104	148	209	5.21
XIX	Standards and codes	232	331	118	50.52
XX	Directives	39	56	86	3.17
XXI	Handbooks	226	322	254	4.01
XXII	Manuals	314	448	321	10.49
XXIII	Proposals	59	84	134	5.73
XXIV	Reports	1,230	1,753	1,428	16.60
XXV	Preprints and reprints	49	70	128	8.49
XXVI	Journals	330	470	499	0.43
XXVII	Textbooks	446	636	423	2.14
	TOTAL	7,688	10,959	10,958	289.57

$J^2 = 289.57$, $X^2 \approx 579.14$, df = 24, $\alpha < 0.0005$

Table 6-15
Usual Composition of Transporting Medium (I-Q29 vs II-Q19)

Order	Description	I	I'	II	J^2 Contribution
I	Yes	3,735	5,017	5,202	1.67
II	No	255	342	157	34.29
	TOTAL	3,990	5,359	5,359	35.96

$J^2 = 35.96$, $X^2 \approx 71.92$, df = 1, $\alpha < 0.0005$

Table 6-16
Actual Volume of Transporting Medium (I-Q32 vs II-Q21)

Order	Description	I	I'	II	J^2 Contribution
I	All from recall	786	903	371	111.08
II	One report or document	1,516	1,741	1,365	22.76
III	A sampling	1,599	1,836	2,033	5.02
IV	All material available	752	864	1,575	103.63
	TOTAL	4,653	5,344	5,344	242.49

$$J^2 = 242.49, \; X^2 \approx 484.98, \; df=3, \alpha < 0.0005$$

Table 6-17
Desired Volume of Transporting Medium (I-Q33 vs II-Q22)

Order	Description	I	I'	II	J^2 Contribution
I	All from recall	786	898	373	108.43
II	One report or document	1,611	1,841	1,625	6.73
III	A sampling	1,240	1,417	1,154	13.45
IV	All material available	1,050	1,200	2,205	148.31
	TOTAL	4,687	5,356	5,357	276.92

$$J^2 = 276.92, \; X^2 \approx 553.94, \; df = 3, \; \alpha < 0.0005$$

Table 6-18
Actual Detail of Transporting Medium (I-Q38 vs II-Q24)

Order	Description	I	I'	II	J^2 Contribution
I	A once over lightly	859	1,194	952	13.64
II	A specific answer	1,002	1,393	2,710	211.37
III	A detailed analysis	1,994	2,772	1,697	129.29
	TOTAL	3,855	5,359	5,359	354.30

$$J^2 = 354.30, \chi^2 \approx 708.60, df = 2, \alpha < 0.0005$$

Table 6-19
Desired Detail of Transporting Medium (I-Q39 vs II-Q25)

Order	Description	I	I'	II	J^2 Contribution
I	A once over lightly	700	964	397	138.94
II	A specific answer	1,043	1,436	2,994	273.97
III	A detailed analysis	2,152	2,963	1,972	99.50
	TOTAL	3,895	5,363	5,363	512.41

$$J^2 = 512.41, \chi^2 \approx 1024.82, df = 2, \alpha < 0.0005$$

Table 6-20
Class of Information (I-Q25 vs II-Q28)

Order	Description	I	I'	II	J^2 Contribution
I	Concepts	379	442	378	2.57
II	Raw data	215	251	372	11.83
III	Math aids and formulae; computer programs	269	314	38'	3.80
IV	Designs or design techniques	191	223	547	68.16
V	Experimental processes and procedures	134	157	187	1.31
VI	Test process and procedures	192	225	235	0.00
VII	Specification	690	805	813	0.00
VIII	Performance and characteristics	1,277	1,490	1,349	3.70
IX	Production processes and procedures	75	88	224	29.64
X	Technical status	517	603	328	41.12
XI	Utilization	348	406	189	39.87
XII	Cost and funding; administrative action	143	167	160	0.00
	TOTAL	4,430	5,170	5,169	202.00

$$J^2 = 207.01, \quad X^2 \approx 414.02, \quad df = 11, \quad \alpha < 0.0005$$

Table 6-21
Field of Information (I-Q26 vs II-Q29)

Order	Description	I	I'	II	J^2 Contribution
I	Production, Management and Social Sciences	247	283	617	61.98
	Miscellaneous arts and sciences	26	30	55	3.68
	Personnel and training	36	41	58	1.46
	Production and management	156	179	437	54.03
	Psychology and human engineering	29	33	67	5.78
II	Medical Sciences	202	2.2	95	28.70
	Medical sciences	202	232	95	28.70
III	Mechanical, Industrial, Civil and Marine Engineering	353	405	355	1.64
	Ground transportation equipment	21	24	31	0.45
	Installations and construction	60	69	146	13.79
	Military science and operations	90	103	86	0.76
	Photography and other reproductive processes	55	63	22	9.89
	Quartermaster equipment and supplies	22	25	4	7.60
	Ships and marine equipment	92	106	50	10.05
	Transportation	13	15	16	0.02

Table 6-21 (Cont)

Order	Description	I	I'	II	J^2 Contribution
IV	Aeronautics and Space Technology	560	642	900	21.58
	Aircraft and flight equipment	233	267	549	48.73
	Guided missiles	284	326	305	0.35
	Navigation	43	49	46	0.05
V	Electronic and Electrical Engineering	1,027	1,177	1,291	2.63
	Communications	200	229	94	28.21
	Detection	165	189	96	15.17
	Electrical equipment	100	115	133	0.65
	Electronics; Electronic-equipment	562	644	968	32.56
VI	Chemical Science and Material	815	934	712	14.97
	Chemical warfare equipment materials	46	52	13	11.70
	Chemistry	127	146	234	10.19
	Fuels and combustion	68	78	43	5.06
	Materials (non-metallic)	161	185	188	0.01
	Metallurgy	109	125	169	3.29
	Ordnance	304	348	65	96.96

Table 6-21 (Cont)

Order	Description	I	I'	II	J^2 Contribution
VII	Physical Science	470	539	747	16.82
	Astronomy; geophysics, and geography	73	85	64	1.48
	Fluid mechanics	71	81	157	12.13
	Nuclear physics and nuclear chemistry	89	102	34	17.00
	Nuclear propulsion	10	11	5	1.13
	Physics	164	188	264	6.39
	Propulsion systems	63	72	223	38.65
VIII	Research and Research Equipment (includes computer related fields)	801	918	448	80.86
	Research and research equipment	801	918	448	80.86
IX	Mathematics	179	205	169	1.73
	Mathematics	179	205	169	1.73
	TOTAL	4,654	5,335	5,334	548.51 230.91

J^2 - Grouped = 230.91, $X^2 \approx 461.82$, df = 8, $\alpha < 0.0005$

J^2 - ungrouped = 548.51, $X^2 \approx 1097.02$, df = 32, $\alpha < 0.0005$

Table 6-22
Essentiality of Information to Task (I-Q46 vs II-Q30)

Order	Description	I	I'	II	J^2 Contribution
I	Absolutely essential	3,064	4,457	4,187	4.22
II	Could have completed w/out	619	901	1,171	1.76
	TOTAL	3,683	5,358	5,358	5.98

$J^2 = 5.98$, $X^2 \approx 11.96$, df = 1, $0.0005 < \alpha < 0.001$

Table 6-23
Extensiveness of Information Use in Task (I-Q47 vs II-Q31)

Order	Description	I	I'	II	J^2 Contribution
I	Not at all	23	32	38	0.26
II	As a lead to information	7	10	47	12.01
III	As background	730	1,003	617	45.99
IV	Directly in task	3,142	4,315	4,657	6.52
	TOTAL	3,902	5,360	5,359	64.78

$J^2 = 64.78$, $X^2 \approx 129.56$, df = 3, $\alpha < 0.0005$

Table 6-24
Discovery of Information Available, But Unknown,
During Task (I-Q48 vs II-Q32)

Order	Description	I	I'	II	J^2 Contribution
A	No	173	196	304	11.66
B	Yes	1,148	1,304	1,196	2.33
	TOTAL	1,321	1,500	1,500	13.99

$J^2 = 13.99$, $X^2 \approx 27.98$, df = 1, $\alpha < 0.0005$

Table 6-25
Use of TAB (I-Q49 vs II-Q37)

Order	Description	I	I'	II	J^2 Contribution
I	Do not know of TAB	531	584	649	1.71
II	Never	248	273	325	2.26
III	About every 6 months	182	200	203	0.01
IV	Once every 2-3 months	122	134	117	0.58
V	Every issue	280	308	206	10.12
	TOTAL	1,363	1,499	1,500	14.68

$$J^2 = 14.68, \; X^2 \approx 29.36, \; df = 4, \; \alpha < 0.0005$$

Table 6-26
Use of DDC (I-Q50/51 vs II-Q39)

Order	Description	I	I'	II	J^2 Contribution
I	Do not know of DDC	286	313	473	16.28
II	Know of DDC, but does not use	444	486	348	11.42
III	Yes, Use DDC	640	701	679	0.18
	TOTAL	1,370	1,500	1,500	27.88

$$J^2 = 27.88, \; X^2 \approx 55.76, \; df = 2, \; \alpha < 0.0005$$

Table 6-27
Use of DOD Specialized Information Centers (I-Q52/53 vs II-Q40)

Order	Description	I	I'	II	J^2 Contribution
I	Do not know of centers	255	282	549	42.89
II	Use other sources instead	349	387	290	7.05
III	Yes, use centers	750	831	661	9.68
	TOTAL	1,354	1,500	1,500	59.62

$$J^2 = 59.62, \; X^2 \approx 119.24, \; df = 2, \; \alpha < 0.0005$$

Table 6-28
Use of English Abstracts or Translations (I-Q54 vs II-Q44)

Order	Description	I	I'	II	J^2 Contribution
I	No	603	662	904	18.70
II	Yes	764	838	596	20.42
	TOTAL	1,367	1,500	1,500	39.12

$J^2 = 39.12$, $X^2 \approx 78.24$, df = 1, $\alpha < 0.0005$

Table 6-29
Encounter of Difficulties (I-Q56 vs II-Q45)

Order	Description	I	I'	II	J^2 Contribution
I	Yes	370	430	861	71.94
II	No	921	1,070	639	54.35
	TOTAL	1,291	1,500	1,500	126.29

$J^2 = 126.29$, $X^2 \approx 252.58$, df = 1, $\alpha < 0.0005$

Table 6-30
User's Year of Birth (I-Q2 vs II-Q48)

Order	Description	I	I'	II	J^2 Contribution
I	1905 and before	30	33	18	2.21
II	1906-1910	88	96	38	12.55
III	1911-1915	98	107	103	0.04
IV	1916-1920	199	217	174	2.36
V	1921-1925	271	296	289	0.04
VI	1926-1930	217	236	334	8.42
VII	1931-1935	227	248	332	6.08
VIII	1936-1940	211	230	180	3.05
IX	1941 and After	34	37	32	0.00
	TOTAL	1,375	1,500	1,500	34.75

$J^2 = 34.75$, $X^2 \approx 61.66$, df = 8, $\alpha < 0.0005$

Table 6-31
Number of Personnel Supervised By User (I-Q3 vs II-Q49)

Order	Description	I	I'	II	J^2 Contribution
I	0	693	759	604	8.81
II	1-5	431	472	471	0.00
III	6-10	121	133	202	7.02
IV	11-20	59	65	95	2.81
V	21-90	55	60	106	6.37
VI	Over 90	10	11	22	1.83
	TOTAL	1,369	1,500	1,500	26.84

$$J^2 = 26.84, \; X^2 \approx 53.68, \; df = 5, \; \alpha < 0.0005$$

Table 6-32
User's Highest Degree (I-Q4 vs II-Q50A)

Order	Description	I	I'	II	J^2 Contribution
I	None	137	147	196	3.50
II	BA	897	961	798	7.55
III	MA	225	241	296	2.82
IV	PhD, MD	116	124	182	5.50
	TOTAL	1,375	1,473	1,472	19.37

$$J^2 = 19.37, \; X^2 \approx 38.74, \; df = 3, \; \alpha < 0.0005$$

Table 6-33
Year of User's Highest Degree (I-Q5 vs II-Q50B)

Order	Description	I	I'	II	J^2 Contribution
I	Before 1945	378	412	307	7.67
II	1945-1954	429	468	513	1.03
III	Since 1954	568	619	679	1.39
	TOTAL	1,375	1,499	1,499	10.09

$$J^2 = 10.09, \; \chi^2 \approx 20.18, \; df = 2, \; \alpha < 0.0005$$

Table 6-34
Field of User's Highest Degree (I-Q4 vs II-Q50C)

Order	Description	I	I'	II	J^2 Contribution
I	No degree	137	149	196	3.20
II	Other	130	142	128	0.36
III	Biology	39	43	6	13.96
IV	Physics	176	192	124	3.64
V	Chemistry	155	169	109	6.47
VI	Mathematics	94	102	81	1.20
VII	Engineering	629	686	845	8.26
VIII	MD	15	16	11	0.46
	TOTAL	1,375	1,499	1,500	37.55

$$J^2 = 37.55, \; \chi^2 \approx 75.10, \; df = 7, \; \alpha < 0.0005$$

Table 6-35
Job Experience of User (I-Q8 vs II-Q51)

Order	Description	I	I'	II	J^2 Contribution
I	1 year and under	219	255	21	99.20
II	1-5 years	555	646	459	15.82
III	5 years and over	601	699	1,120	48.72
	TOTAL	1,375	1,600	1,600	163.74

$$J^2 = 163.74, \chi^2 \approx 327.48, df = 2, \alpha < 0.0005$$

Table 6-36
Type of Work Activity (I-Q9 vs II-Q54)

Order	Description	I	I'	II	J^2 Contribution
I	Detailed scientific or engineering	786	877	823	0.80
II	Technical evaluation	399	445	182	55.16
III	Administration	158	176	494	76.89
	TOTAL	1,343	1,498	1,499	132.85

$$J^2 = 132.85, \chi^2 \approx 265.70, df = 2, \alpha < 0.0005$$

Table 6-37
Kind of Work Position (I-Q10 vs II-Q55)

Order	Description	I	I'	II	J^2 Contribution
I	Research	371	406	458	1.56
II	Advanced development	131	143	146	0.01
III	Engineering development	165	180	282	11.26
IV	Operational system develop-ment	214	234	139	12.10
V	Reliability and quality control	47	51	63	0.63
VI	R&D Support	318	348	274	4.40
	TOTAL	1,246	1,362	1,362	29.96

$J^2 = 29.96$, $\chi^2 \approx 59.92$, df = 5, $\alpha < 0.0005$

Table 6-38
Field of Work Position (I-Q11 vs II-Q56)

Order	Description	I	I'	II	J^2 Contribution
I	Behavorial and Social Science	60	66	159	19.22
	Miscellaneous arts and sciences	8	9	17	1.23
	Personnel and training	10	11	10	0.02
	Propulsion systems	27	30	120	27.00
	Psychology and human engineering	15	16	12	0.64
II	Medical Sciences	82	90	30	15.00
	Medical sciences	82	90	30	15.00
III	Mechanical; Industrial, Civil and Marine Engineering	113	124	83	3.85
	Ground transportation equipment	13	14	5	2.13
	Installation and constructions	16	18	30	1.50
	Military sciences and operations	20	22	31	0.76
	Photography and other reproductive processes	6	7	2	1.39
	Quartermaster equipment and supplies	8	9	0	4.50
	Ships and marine equipment	48	52	12	12.50
	Transportation	2	2	3	0.10
IV	Aeronautics and Space Technology	231	253	336	5.85
	Aircraft and flight equipment	96	105	208	16.95
	Guided missiles	117	128	106	1.03
	Navigation	18	20	22	0.05
V	Electronics and Electrical Engineering	276	302	400	6.84
	Communications	68	74	24	12.76

Table 6-38 (Cont)

Order	Description	I	I'	II	J^2 Contribution
	Detection	64	70	14	18.67
	Electrical equipment	12	13	25	2.74
	Electronics, electrical equipment	132	145	334	37.29
VI	Chemical Science and Material	247	270	159	14.36
	Chemical warfare, equipment and material	21	23	3	7.69
	Chemistry	32	35	74	6.98
	Fuels and combustion	17	18	6	3.00
	Materials (non-metallic)	30	33	39	0.25
	Metallurgy	16	18	23	0.30
	Ordnance	131	143	14	53.00
VII	Physical Science	142	156	187	1.40
	Astronomy; geophysics and geography	34	37	12	6.38
	Fluid mechanics	12	13	29	3.05
	Nuclear physics and nuclear chemistry	29	32	10	5.76
	Nuclear propulsion	2	2	2	0.00
	Physics	40	44	60	1.23
	Propulsion systems	25	28	74	10.37
VIII	Research and Research Equipment	184	201	114	12.01
	Research and research equipment	184	201	114	12.01
IX	Mathematics	31	34	27	0.40
	Mathematics	31	34	27	0.40
	TOTAL	1,366	1,496	1,495 266.68	78.93

Ungrouped: $J^2 = 266.68$, $\chi^2 \approx 533.36$, df = 32, $\alpha < 0.0005$

Grouped: $J^2 = 78.93$, $\chi^2 \approx 157.86$, df = 8, $\alpha < 0.0005$

Table 6-39
User's Equivalent Government Service (GS) Rating (I-Q1 vs II-Q58)

Order	Description	I	I'	II	J^2 Contribution
I	GS-6	53	58	0	29.00
II	GS-9	111	121	28	29.02
III	GS-11	210	229	258	.86
IV	GS-12	313	341	289	2.15
V	GS-13	326	356	286	3.82
VI	GS-14	223	243	294	2.42
VII	GS-15	113	123	184	6.06
VIII	GS-16 and up	26	28	161	46.80
	TOTAL	1,375	1,499	1,500	120.13

$$J^2 = 120.13, \quad X^2 \approx 240.26, \quad df = 7, \quad \alpha < 0.0005$$

Table 6-40
Interviewer's Assessment of User's Information Needs (I-Q59 vs II-Q59)

Order	Description	I	I'	II	J^2 Contribution
I	Insignificant Need	330	360	290	3.77
II	Moderate Need	597	652	728	2.09
III	Large Need	447	488	482	0.02
	TOTAL	1,374	1,500	1,500	5.88

$$J^2 = 5.88, \quad X^2 \approx 11.76, \quad df = 2, \quad 0.001 < \alpha < 0.005$$

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Reference 1 contains an extensive bibliography of past user-needs studies, and Reference 2 contains a review of recent ones. Reference 7 is entirely devoted to scientific communication.

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13 ABSTRACT

The Department of Defense (DOD) has conducted a two-phase study to determine how scientists and engineers in government and industrial research, development, and production activities acquire information for performing work assignments on DOD programs. The Phase I study covered the information needs of DOD personnel engaged in research, development, test, and evaluation (RDT&E) activities.

Phase II of this study investigated the nation's defense industry to determine its information needs, and the flow of scientific and technical information (flow process) inherent in satisfying those needs. It is based on a representative sample of 1500 individuals from approximately 120,000 scientists, engineers, and technical personnel in 83 organizations in the defense industry. Sixty-three questions were asked them regarding the user of scientific and technical information, his scientific or technical task, his utilization of information centers and services and the search and acquisition process. The analysis included compilation of frequency distributions for answers to questions and pairs of questions. In addition the qualitative data have been transformed into numerical form, and models have been specified for relationships among elements of the flow process. The models are estimated from the data by means of regression analysis, to yield significant relationships and factors within the flow process.

The Phase II Final Report describes the results of Phase II, and compares them with those of Phase I. It is presented in three volumes. Volume I contains a nontechnical summary of Phase II, including guidelines for management decisions and recommendations for the future. Volume II describes the technical approach, findings, and recommendations of the study. Volume III presents the reduced data, in the form of frequency distributions and models for relationships among elements of the flow process.

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
User Needs						
Information Requirements						
Information Centers and Services						
Flow of Scientific and Technical Information (Flow Process)						
Structural and Numerical Description of Flow Processes						
Relationships and Factors within Flow Process						
Analysis and Optimization of Flow Process						
Information Storage and Retrieval						
Defense Documentation Center						
Technical Abstract Bulletin						
Scientific and Technical Aerospace Reports						
Engineering Data						
STINFO						
Surveys						
Critical Incident Technique						
Interview Guide						
Defense Industry Population						

END